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APPENDIX C

# California Youth Authority Guidelines

State of California Department of Health Services

M e m o r a n d u m

Date: August 27, 2001

To: John Brady, CHSA II
Department of the Youth Authority

From: Paul Fitzmaurice
Environmental Specialist IV
Institutions Program

Subject: Implementation of Healthy Schools Act-Youth Authority

In response to our recent conversation regarding the implementation of the Healthy Shools Act by the Youth Authority, we contacted representatives of the Department of Pesticide Regulation and the Department of Education and discussed the matter.

The law, designed to change pest control practices at schools to incorporate the least toxic means of control includes a section [Education Code, Article 4, Chapter 5, Part 10.5, Section 17612 (e)] in which California Youth Authority schools are instructed what measures are required to be taken by Youth Authority facilities to comply with the Act.

Specifically, the school administator is required to notify the chief medical officer (CMO) of the facility at least 72 hours prior to application of pesticides and the CMO is required to take all steps necessary to protect the health of the pupils in that facility. Guidelines were not developed to clarify this "all steps necessary".

After consultation with affected agencies, we recommend that the following action be taken by Youth Authority facilities to comply with the Act. These measures, in our opinion, would be considered reasonable and would provide the required protection to the wards at the facility.

• The CMO of each facility should receive a list of all pesticides that would be anticipated to be used in the facility during the calendar year. Attached to the list should be a copy of the product label (or product EPA registration number), and the Material Safety Data Sheet (MSDS) for each item on the list. [California Code of Regulations (CCR), Title 3, Division 6, Chapter 3, section 6723]

• Existing law [Food and Agricultural Code (FAC), section 12973] requires any user of a pesticide to comply with the label.

• Existing law CCR, sections 6618, 6624 & 6627 detail notification, pesticide use records, and reporting requirements for licensed Pest Control Businesses (PCB), while FAC, section 13186 requires specific pesticide use information for school site applications by PCBs. Also, staff assigned pest control duties and contracted pest control companies should provide the CMO 72-hour notice of specific pest control applications.

• The yearly list of pesticides anticipated to be used should be posted at the entry to the facility and a copy should be provided to all staff members.

• Existing regulations require employers to have a written training program and to assure employees are

trained before handling any pesticide. [CCR, section 6724] Staff responsible for pest control applications should contact the local County Agricultural Commissioner's (CAC) Office for assistance with determining applicable pesticide regulations. Staff responsible for pest control applications should keep detailed records of material used (including product EPA registration number), amount used, application locations, pests controlled, and date of application.

• The CMO should thoroughly investigate any complaint or suspected illness due to application of a pesticide and take appropriate action (e.g. filing of pesticide illness report with local CAC).

• The purpose of the law is to reduce the use of toxic pesticides at a school site; facilities may wish to institute policies to stress integrated pest management (IPM) practices and to reduce the use of pesticides when such measures as sanitation and exclusion can help to achieve the desired control. Also, if a CMO reviews label and MSDS information (as well as accessing the Department of Pesticide Regulation's "School IPM" Web site at www.cdpr.ca.gov/docs/schoolipm) and determines that the use of a material presents an unacceptable risk or is inappropriate for the situation he/she should restrict its use.

It should be noted that the law exempts products that are deployed as self-contained baits or traps, gels or pastes deployed as "crack or crevice" treatments, and pesticides that are exempt from federal regulations, or to anti-microbial pesticides, including sanitizers and disinfectants.

If you have any questions please contact Mark Jeude at (916) 323-2758 or me at (916) 445-4409.

APPENDIX E

# School IPM Policies

# San Diego Unified School District IPM Policy

(This policy was adopted on October 22, 1991, by the San Diego Unified School District.)

Structural and landscape pests can pose a significant problem to people and the environment. Hazardous pest control chemicals can also pose a significant problem to people and the environment. It is therefore the policy of the San Diego Unified School district to incorporate Integrated Pest Management (IPM) procedures for the control of structural and landscape pests. IPM means that pest problems will be alleviated with the least possible hazard to people, property, and the environment by using IPM methods that are safe, effective and economically feasible. Pesticides will be carefully evaluated before use and will only be used after non-hazardous and other safer methods have been considered.

Integrated Pest Management will include the following components:

1. Educate staff, students and the public about school pest problems and the Integrated Pest Management policies.
2. Develop plant inventory and pest problem survey procedures.
3. Identify pests that are considered public health problems and methods to prevent them in the least hazardous way from becoming a health problem.
4. Identify and evaluate cultural/environmental conditions on the grounds that encourage pest problems. Make recommendations for remedial action.
5. Monitor population levels of pests to determine treatment procedures.
6. Review all available options for acceptability and/or feasibility before the use of a chemical pesticide; cost of staffing considerations alone will not be the sole justification for use of chemical control agents. Records of IPM strategies considered prior to chemical treatment will be maintained.
7. Ensure that pesticide applicators whether in-house or contracted are educated and trained in the use of current pesticides approved for use by the SDUSD and that they follow label precautions and application regulations. Contracted companies are to be in compliance with the San Diego Unified School District's Integrated Pest Management policy.
8. Establish and maintain pesticide use reporting and recordkeeping procedures.
9. Establish system to evaluate and measure control success.
10. Make information accessible to the public and employees regarding pesticides used and area treated.
11. Eliminate fire potential (e.g. tall, dry grass, dead trees) in the safest and most timely manner using available resources.

# Novato Unified School District
# Board Policy

Series 3000/BP 3514.3

The Novato Unified School District recognizes that maintenance of a safe, clean and healthful environment for students and staff is essential to learning. It is the goal of the District to provide the safest and lowest risk approach to control pest problems while protecting students, staff, the environment and District properties and assets.

The District adopts a Least-Toxic Integrated Pest Management (IPM) Policy. Pest will be controlled: to protect the health and safety of the students and staff; to maintain a productive learning environment; and, to maintain the integrity of the school buildings and grounds. It is the policy of the District to focus and develop long-term pest prevention methods and give "non-chemical" methods first consideration when selecting appropriate control measures. The full range of alternatives will be considered, giving preference to non-chemical methods, and then chemicals that pose the least hazard to people and the environment.

A Least-Toxic Integrated Pest Management (IPM) Policy contains the following elements:

1. Monitoring to determine pest population levels and identify decisions and practices that could effect pest populations.
2. Setting of injury and action levels to determine when vegetation or a pest population at a specific site cause(s) unacceptable economic or medical damage wherein corrective action should be taken.
3. Modification of pest habitats to deter pest populations and minimize pest infestation.
4. Consideration of a range of potential treatments for the pest problem, including prevention, mechanical, cultural, and biological methods of pest control, using synthetic chemical controls only as a last resort and only those chemicals that pose the least possible hazard to people and the environment.
5. Establish a committee to provide guidance, education and support regarding IPM procedures. Members of the committee will be appointed by the Superintendent and may include the following: Superintendent or designee, Board Member, IPM Coordinator, parent, certificated staff member, classified staff member and one community member at large.
6. Abstain from using any pesticide product containing an ingredient known to the State of California to cause cancer, developmental toxicity, or reproductive toxicity, pursuant to the California Safe Drinking Water and Toxic Enforcement Act of 1986, or any pesticide product containing an ingredient classified by the United States Environmental Protection Agency as a known human carcinogen, reproductive toxin, developmental toxin or endocrine disrupter.

The Superintendent shall designate a staff person to coordinate the IPM program. The IPM coordinator shall be educated in the principles and practice of least toxic IPM and be responsible to provide:

- Oversight for the successful implementation of the program consistent with this policy and coordinate all District efforts to adopt IPM.
- Overall program management and provide proposed procedures and products for use in managing pest populations.
- Formal notification to parents, staff and students of any chemical pesticide application including pre-and-post signage.

- Establish and maintain a registry of parents, staff and students that have indicated they desire notification 72 hours prior to pesticide applications.
- Record-keeping guidelines for any chemical pesticide application.
- Education and training for IPM personnel.
- A list of approved procedures and products.

Legal References:

EDUCATION CODE
17608 - 17613 Healthy Schools Act of 2000
48980.3 Healthy Schools Act of 2000

FOOD AND AGRICULTURAL CODE
13180 Healthy Schools Act of 2000

APPENDIX F

# IPM-Related Curricula and Resources for the Classroom

**BugPlay**

For grades K through 3. Hands-on experiences with harmless insects help students develop an appreciation for these amazing creatures. Lessons, with accompanying music cassette, include the use of poems, songs, and drawings. Available from: Addison Wesley Publishing Co., (800) 552-2259

**Learning about Pesticides at School:**

Project Ideas for High School or Middle School Classrooms or Student Environmental Clubs. September, 199; 22 pp. plus 8 page glossary

Teaching/learning activities designed for middle school and high school level students. It includes a variety of activities that can be combined into one comprehensive school pesticide use reduction project. This is an ideal project for interdisciplinary classes or environmental clubs. The project also involves activities appropriate in traditional health, chemistry, biology, ecology, math, speech, and social studies classrooms. Better yet, it involves students in a "real-world" project that will make a difference in their own lives.

Available from: Northwest Coalition for Alternatives to Pesticides (NCAP), P.O. Box 1393, Eugene, OR 97440 or call (541) 344-5044.

**Legacy of a Pest**

A science, technology, and social studies curriculum guide for understanding and dealing with pest problems. There are over 50 teacher-tested activities dealing with the gypsy moth problem, its life cycle, IPM control strategies, chemical control strategies, and more. 243 pp.

Available from: Legacy of a Pest, 607 E. Peabody Dr., Champaign, IL 61820 or call (217) 333-6880.

**Living With Insects in the Big City: Urban Insect Ecology and Safe Pest Management**

A curriculum for grades K-3. It contains hands-on activities, teaches science framework concepts and applies biological concepts to our urban world. Also included are graphic aids.

Available from: Citizens for a Better Environment (CBE), 500 Howard St., Ste. 506, San Francisco, CA 94105 or call (415) 243-8373.

**Teaching Ideas: Pesticide Awareness and the Concept of Integrated Pest Management**

Curriculum is suitable for use in middle, junior, or senior high school biology, ecology, or social studies courses. Included is "How to Map Pesticide Use in your School (and Community)," and four lesson plans on pesticides and Integrated Pest Management concepts.

Available from: Northwest Coalition for Alternatives to Pesticides (NCAP), P.O. Box 1393, Eugene, OR 97440 or call (541) 344-5044.

**The Growing Classroom**

For grades 2 through 6. Students use indoor and outdoor gardens for the study of science and nutrition through experimentation, investigation, and data collection and analysis.

Available from: Addison Wesley Publishing Co. at (800) 552-2259.

**The Young Entomologists' Society (Y.E.S.)**

An international society of young and amateur insect enthusiasts. It operates on a membership basis and publishes several newsletters, sells books, educational toys, and clothing. This organization encourages active involvement of its young members and communication with each other, primarily through the mail. A catalog of their publications is available.

For more information, write to Y.E.S. Inc., 1915 Peggy Place, Lansing, MI 48910-2553 or call (517) 887-0499.

APPENDIX G

# Pesticide Information Resources

Product manufacturers can provide information on hazards, efficacy, and safe disposal of pesticides. They are required to provide the public with a sample label and an MSDS (material safety data sheet) on request.

The Department of Pesticide Regulation is responsible for regulating pesticides in California. This includes product evaluation and registration, environmental monitoring, residue testing of fresh produce, and local use enforcement through the county agricultural commissioners.

DPR's School IPM Web site contains school-specific information regarding pest management, pesticide safety and environmental and health impacts of pesticide use. It can be found at www.schoolipm.info

DPR Pesticide Databases-Look up pesticide products by active ingredient, product name, and other criteria, and then select "full report" for a brief summary of toxicity information. The databases contain only California-registered products. Follow the "Product and Use Data" link at http://www.cdpr.ca.gov/

For more information, call (916) 324-4100, visit http://www.cdpr.ca.gov/ or write to DPR at 1001 I Street, P.O. Box 4015, Sacramento, CA 95812-4015.

Cooperative Extension personnel (look in the government section of the phone book under Cooperative Extension or visit http://ucanr.org/ce.cfm) can provide information on the hazards and efficacy of pesticides. They can provide up-to-date information about pesticides registered for a particular pest. The Cooperative Extension office also provides services for insect identification.

Each county in California has a County Office of Agriculture that is available to give assistance. Check the government section of the phone book for the closest office.

The National Pesticide Information Center (NPIC) operates a toll-free hotline, staffed by toxicologists, to provide the general public as well as the medical, veterinary, and other professional communities with information on pesticide poisonings, correct use of pesticides, referrals for laboratory analyses and investigation of pesticide incidents, emergency treatment information and pesticide clean-up and disposal procedures

For more information, call NPIC at (800) 858-7378 (hotline), visit http://npic.orst.edu/ or write to NPIC, Oregon State University, 333 Weniger, Corvallis, OR 97331-6502

US EPA Office of Pesticide Programs-This site includes consumer alerts, information on pesticide registrations and educational materials.

For more information, visit http://www.epa.gov/pesticides/ or write to US Environmental Protection Agency, Office of Pesticide Programs, Ariel Rios Building, 1200 Pennsylvania Ave. NW, Washington, D.C. 20460

Compendium of Pesticide Common Names-Find active ingredients associated with pesticide common names. This electronic compendium is intended to provide details of the status of all pesticide common names, together with their systematic chemical names, molecular formulae and Chemical Abstracts Registry Numbers.

http://www.hclrss.demon.co.uk/

An Introduction to Insecticides-A summary of common insecticides, written by Professor Emeritus George Ware of University of Arizona. It is somewhat technical.

http://ipmworld.umn.edu/chapters/ware.htm

See also Ware, G.W. (2000). The Pesticide Book, 5th Ed. Thomson Publications, Fresno, California.

APPENDIX H

# IPM for Schools Recommended Reading

**School IPM Manuals**

Daar, S., Drlik, T., Olkowski, H., and Olkowski, W. 1997. IPM for Schools: a How-To Manual. Bio-Integral Resource Center, Berkeley, CA. 215 pp.

The California School IPM Guidebook was based in part on this publication. It was published in association with U.S. EPA region IX and can be found online at http://www.epa.gov/region09/toxic/pest/school/index.html

Martz, E., Ed. 2001. IPM for Pennsylvania Schools: a How-To Manual. Pennsylvania Integrated Pest Management Program 112 pp.

This manual was based in part on the IPM for Schools: A How-to Manual, published by U.S. EPA region IX in association with the Bio-Integral Resource Center. It can be accessed at http://paipm.cas.psu.edu/schoolmn/contents.htm.

Regents of the University of Wisconsin System. 2000. Wisconsin's School Integrated Pest Management Manual.

This online School IPM Manual be viewed at http://ipcm.wisc.edu/programs/school/table.htm

Stauffer, S., Ferrentino, R., Koplinka-Loehr, C., and Sharpe, K. 1998. IPM Workbook for New York State Schools. Cornell Cooperative Extension. IPM Publication Number 605. 155pp.

This is an excellent, easy-to-read school IPM manual. It can be found online at http://www.nysipm.cornell.edu/publications/ under "The School IPM Workbook" link.

**General IPM**

Dreistadt, S.H., J.K. Clark, and M.L. Flint. 1994. Pests of Landscape Trees and Shrubs: an integrated pest management guide. University of California Statewide Integrated Pest Management Project, Division of Agriculture and Natural Resources (Publication 3359), Davis, CA. 327 pp.

Excellent guide for managing problems on a wide variety of plants; each pest is illustrated with a color plate.

Ebeling, W. 1975. Urban Entomology. University of California, Division of Agricultural Sciences, Los Angeles. 695 pp.

A classic text on the biology and management of urban pests, including rats and mice. Excellent drawings and photographs and a readable text make it outstanding. Dr. Ebeling is the U.S. expert on the use of silica gel, boric acid, and other least-toxic pesticides for insect control in urban and suburban environments. Only available online at http://entmuseum9.ucr.edu/ent133/ebeling/ebeling.html

Flint M.L. 1998. Pests of the Garden and Small Farm: a grower's guide to using less pesticide, 2nd Edition. University of California Statewide Integrated Pest Management Project, Division of Agriculture and Natural Resources (Publication 3332), Davis, CA. 286 pp.

Summarizes IPM approaches to more than a hundred pest insects, weeds, and plant diseases found in the U.S. and Canada. Beautifully illustrated with color plates.

Hygnstrom, S.E., R.M. Timm, and G.E. Larson, eds. 1995. Prevention and Control of Wildlife Damage. University of Nebraska, Institute of Agriculture and Natural Resources, Lincoln. 250 pp.

This loose-leaf book is the most comprehensive source of information available on managing wildlife pest problems. The groups covered include rodents, bats, deer, birds, reptiles, and others.

Leslie, A.R. 1994. Handbook of Integrated Pest Management for Turf and Ornamentals. Lewis Publishers, Boca Raton, FL. 660 pp.

The EPA assisted in the development of this book with the stated purpose of reducing pesticide pollution. It is intended for professionals who deal with urban landscaping and turf management of all kinds.

Madison, J.H. 1971. Practical Turfgrass Management. PWS Publishers, Boston. 466 pp.

This is the best lawn management text yet written.

Mallis, A. 1997. Handbook of Pest Control 8th ed. CIE Publications, Cleveland, OH. 1,400 pp.

A classic work on urban pests. Excellent reference book.

Marer, P.J. 2000. The Safe and Effective Use of Pesticides, 2nd Ed. University of California Statewide Integrated Pest Management Project, Division of Agriculture and Natural Resources (Publication 3324), Davis. 352 pp.

This book provides updated and detailed information for selecting, using, handling, storing, and disposing of pesticides. It is the study guide for all categories of DPR's Qualified Pesticide Applicator License and Qualified Pesticide Applicator Certificate exams.

Moore, H.B. 1995. An Introduction to Wood Destroying Insects: their identification, biology, prevention and control. Pest Control Magazine, Cleveland, OH. 120 pp.

Good descriptions of and control information for termites, wood-boring beetles, wood wasps, carpenter bees, and carpenter ants.

Olkowski, W., S. Daar, and H. Olkowski. 1991. Common-Sense Pest Control. - Least-toxic solutions for your home, garden, pets and community. Taunton Press, Newtown, CT. 715 pp.

An excellent, comprehensive resource book on IPM. Illustrated with photos, drawings, tables, and charts.

Schultz, W 1989. The Chemical-Free Lawn. Rodale Press, Emmaus, PA. 194 pp.

An excellent primer on lawn care without the use of synthetic chemical products.

Ware, G.W 1999. The Pesticide Book. 5th ed. Thomson Publications, Fresno, CA. 418 pp.

This valuable reference is arranged by type of pesticide: insecticide, rodenticide, avicide, herbicide, etc. It includes discussions on modes of action, pesticide resistance, toxicity and hazards, and safe handling and storage.

APPENDIX I

# Sample IPM Contract Specifications

Contracting for IPM services involves several steps, depending on level of service required and requirements in the contracting process. The process described below is taken from San Bernardino County Superintendent of Schools Office, Inland Empire Schools Insurance Authority County and the City of Santa Monica and relates to indoor and perimeter pest control. The documents included are meant to serve as examples. They served as a pilot project for those involved at the time. It was successful in that it achieved the best possible service for the cost.

The process started with sending a Request for Qualifications (RFQ) to all local pest control companies. After reviewing and ranking the RFQ's submitted by the companies, the top five candidates were asked to submit documents in response to the Request for Proposal (RFP) and participate in an oral interview. The RFP was provided to those companies who were judged to provide quality IPM service.

**Request for Qualifications (RFQ1)**

Qualifying bidders allows the contracting agency to set standards for pest management above normal industry standards. This is particularly important when seeking highly qualified companies and personnel to implement an IPM program. The costs to the school will not necessarily higher than "low-bid" for several reasons. Most importantly, the company seeking a contract with a school district to do IPM will gain credibility within the community an, as they become known, gain additional business. Additionally, a company conducting an IPM program will be reimbursed to allow it to make a profit, and, because pest problems are being solved, the number of pest calls by the company can be diminished.

Although the RFQ process was treated as a separate activity, it may be incorporated into the RFP process. It is important to recognize that it is a two-step process.

Request for Proposals (RFP)

Qualified bidders are provided an opportunity to bid on the IPM project. Guidelines outlined in the RFP allow potential contractors a clear description of the project and is given an opportunity to see the types of facilities where pest control is to be provided. Usually a walk-through is conducted for all prospective bidders.

There are two ways to accept bids and subsequent bills. The first is the industry standard which is a flat fee for each facility. Usually, grammars schools are the least expensive per month, middle schools higher, and high schools the highest. However, there are typically additional charges for any time over and above the routine call. For example, if monthly service was recently provided, but a teacher had ants in the classroom that was not part of the service, the company will change an additional fee to come and take care of the problem. The second method, rarely used, is to pay a fee for service on an hourly basis (The range will be $50 to $120 per hour depending on location and competitive nature within the pest management business community.) This method assures that pest problems are solved with the necessary labor to do the job right. For example, a mouse problem may require trapping for several days in a row. It may be necessary to have a technician setting traps in the early evening and checking them the next morning for fore staff and children arrive at school.

Regardless of the type of contract awarded, it is necessary to establish a quality control process. This will include evaluation of reports submitted by the pest management company, and periodic meeting with the company including the pest control technician(s) involved.

Another option proven valuable, but rarely done, is an oral interview of those submitting bids. When considering the potential problems associated with pesticide use, an oral interview allows the sincerity of the prospective bidder to be evaluated. Additionally, it gives bidders a chance to explain their proposal to the panel rather than the trying

to interpret what they have written.

Contracts

The contract is an extension of the RFP, but has the legal requirements as set forth by the district. Insurance, campus access, time of pesticide application, and other requirements are set forth in the contract. Each district has different requirements. Below are two examples where IPM has been the focus of the contract.

I. REQUEST FOR QUALIFICATIONS

The San Bernardino County Superintendent of Schools Office (SBCSS) is soliciting Statements of Qualifications on behalf of the school and community college districts of San Bernardino County, California. Responders must be licensed pest control contractors for the implementation of an Integrated Pest Management (IPM) Program that will potentially service forty (40) school and community college districts in the County (see attached listing and maps). Qualified contractors shall have demonstrated experience in the control strategies associated with IPM and have the ability to train school and college employees in IPM practices by providing a classroom-type overview and discussion of techniques necessary for a successful IPM Program.

Background and Goals

Some of the goals of IPM implementation include reducing resource consumption, reducing waste generation and pollution, reducing the use of hazardous materials and safeguarding the local environment and public health.

Conventional pest control techniques have relied extensively on the use of spray-applied chemical pesticides that contribute to ground and surface water contamination and create the potential for exposure to building occupants and visitors. Integrated Pest Management programs seek to minimize the spray application of pesticides by focusing on long-term, mechanical and administrative measures to control pests, thereby reducing the use of pesticides and toxicity in school and college buildings while maintaining a comfortable and safe work environment.

Summary of Work

The pest control contractor selected by the SBCSS and participating districts will provide assessment, evaluation; monitoring and pest control services for school and college owned/leased/used buildings. These buildings may include classrooms, offices, food service areas, support facilities and restrooms. Each building shall be evaluated by the contractor to identify the presence of existing pest populations. When appropriate, the contractor will recommend necessary control strategies including preventative maintenance and sanitation measures. The contractor will respond to emergency calls at no additional cost and advise district staff of the available strategies for control. The contractor will be responsible for informing appropriate staff of the need for pesticide use. In addition, the contractor will supply trained personnel to educate district staff on the most effective means to achieve pest control in and around their workspace in accordance with established IPM techniques.

Submittal Format and Deadline

Licensed pest control contractors interested in working with the SBCSS and participating districts to implement this innovative program must submit a Statement of Qualifications according to the following format (Note - companies not submitting according to the format will not be evaluated):

Description of pest control company including: name and address, names and resumes of personnel that would be servicing this account, integrated pest control services that can be provided including monitoring, training and pesticide applications.

Description of the equipment, products, or services your company uses to control structural pests commonly encountered (i.e. termites, birds, rodents, ants, cockroaches, weeds, etc).

Description of experience in the design or implementation of IPM programs including: list of clients receiving IPM service or otherwise from your company (please include a contact name and telephone number).

Description of in-house training program provided for company staff. Experience in providing training (can be informal or formal) for occupants and others who receive service from your company.

Description of health and safety program for employees and site occupants.

Summary of results of all regulatory inspections and violations in the past 5 years and your firm's response to violations.

Listing of types of insurance coverage (and policy limits) the company provides including a statement as to whether the company's insurer will name the SBCSS and Participating Districts as Additional Insureds on the General Liability policy.

Six copies of the Statement of Qualifications must be submitted no later than 4:30pm on February 20, 1998, to:

Andy Yasenovsky, ARM, Inland Empire Schools Insurance Authority, c/o San Bernardino County Superintendent of Schools Office, 601 North E Street, San Bernardino, CA 92410-3093

Please note that when submitting documents to the SBCSS, contractors are requested to comply with the following guidelines:

All copies should be double-sided. Plastic covers or dividers should be avoided. Unnecessary attachments or documents not specifically asked for should not be submitted. Avoid superfluous use of paper (e.g. separate title sheets or chapter dividers).

Thank you for your cooperation in this request.

Selection Process. A selection panel made up of SBCSS staff and school/community college employees in San Bernardino County will review the Statements of Qualifications and will develop a list of finalists. An IPM Request for Proposal (RFP) will then be mailed to these finalists to determine the scope and cost effectiveness of specific programs. Finalist companies may be asked to conduct an oral presentation.

If you have any questions about this Request for Qualifications process, please contact Andy Yasenovsky at 909/387-4377. Attachment (District Listing and Maps of San Bernardino County)

II. REQUEST FOR PROPOSAL

The San Bernardino County Superintendent of Schools Office (SBCSS), through the Inland Empire Schools Insurance Authority (IESIA), is soliciting Service Proposals from qualified, licensed Pest Control Operators for the implementation of an Integrated Pest Management (IPM) Program. All companies submitting proposals must have been previously evaluated and prequalified by our IPM Screening Panel. The one, or more, successful proposer's services will be offered by way of a master agreement to the school and community college districts in San Bernardino County. At this time, it is unknown which districts will be participating in the master agreement.

The SBCSS/IESIA IPM Program, as detailed in the enclosed "Conditions for Professional Service", is designed as a pest prevention program that stresses education and training of school district and community college staff as well as physical, mechanical and chemical control. The SBCSS/IESIA is seeking assistance in dealing with immediate pest control problems until long-term solutions can take effect. Response to this request must address all aspects of the defined program and not simply extermination services.

Attached you will find the following documents which provide further detail regarding this request:

1. List of school and community college districts in San Bernardino County
2. IPM Conditions for Professional Service (Attachment "A")

Contract Duration and Renewal

The contract period shall be from May 1, 1998, through June 30, 2000. The SBCSS/IESIA reserves the right and

option, at its sole discretion, to extend any contract for a period of one or two additional one-year periods from the date of expiration at the same terms and conditions.

Submittal Format and Deadline

Licensed pest control operators responding to this request must submit an Integrated Pest Management Service Proposal according to the following format:

1. Copy of appropriate licenses of BOTH the Pest Control Operator and the personnel that will be servicing this account, including appropriate subcontractors (see section I.C. of IPM Conditions for Professional Service).

2. Completed section I.F. of IPM Conditions for Professional Service listing hourly rates and other fees.

Description of services you will provide to accomplish the requirements of this program.

Include the following elements:

a. Detail of monitoring program for these sample pests: Norway rats, German cockroaches, ants, and termites (both subterranean and dry wood).

b. Suggested format/outline for training of Pest Managers (see section I.A.2.) and other district staff.

c. Quality control program. This should include, but not be limited to, specific reporting of information for pesticide use including the manufacturer and name of product, USEPA product registration number, total amount of product used, unit of measurement and the county-district-school code (CDS) where the application occurred.

4. List the options available to control each of the following pests. After each option, rank each option as"low", "medium" or "high" risk, relative to human health and the environment. Please include recommended brand names when applicable.

Pests: German cockroaches, American cockroaches, Argentine ants, Fire ants, Norway rats, Roof rats, Mice,. Cat fleas, House flies.

5. Estimate the overall cost, per individual school site, per contract year, of rendering the above services. These cost estimates should be categorized by type of school site (i.e. colleges, elementary schools, high schools, middle schools, support facilities, etc.).

Six copies of the Proposal for Service should be submitted no later than 4:30pm on April 17, 1998, to:

Andy Yasenovsky
Safety/Loss Control Manager, Inland Empire Schools Insurance Authority
c/o San Bernardino County Supt. of Schools Office
601 North E Street
San Bernardino, CA 92410

Please note:

When submitting documents, proposers are requested to comply with the following guidelines:

All copies should be double-sided. Use of plastic covers, binders or dividers should be avoided. Unnecessary attachments or documents not specifically asked for should not be submitted. Avoid superfluous use of paper (i.e. separate title sheets or chapter dividers).

Thank you for your cooperation in this important effort.

If you have any questions about this Request for Proposal, please contact Andy Yasenovsky at 909/387-4377.

CONDITIONS FOR PROFESSIONAL SERVICE

I. General

A. Description of Program

This contract specification is part of a comprehensive Integrated Pest Management (IPM) Program for properties

owned, leased or otherwise used by the school and community college districts of San Bernardino County. IPM is a method for achieving long-term, environmentally sound pest control with a wide variety of technical and management strategies. Control techniques include structural modifications and procedural modifications that reduce food, water, harborage, access, and environmental conditions that are favored by pests. Management strategies include education, training, and promotion of behavioral practices that are important in the IPM program.

The success of an IPM program relies on both verbal and written communication between the CONTRACTOR and the school and community college (DISTRICTS) employees. The DISTRICTS will designate appropriate individuals to take on the following roles and has created a site-specific operational plan for pest control.

1. IPM Coordinator (District) – This individual will provide oversight for the entire district and is responsible for ensuring that all contract work is provided by the CONTRACTOR and for the approval of all pest control techniques to be utilized by the CONTRACTOR outside those listed in the Pest Management Plan. The IPM Coordinator will meet regularly with the CONTRACTOR to evaluate the program's success and find solutions to problems raised by either district personnel or the CONTRACTOR. This district employee will serve as the primary point of contact for the CONTRACTOR.

2. Pest Managers (School Site) – They will keep records of CONTRACTOR activities and performance. Pest Managers will have received specialized training on IPM and will continue to be trained as a group by the CONTRACTOR on a formal and informal basis. The Pest Managers will coordinate with the IPM Coordinator for the scheduling of routine pest control service for their site and will provide management of structural repairs, modifications, sanitation, and maintenance. Pest Managers may contact the CONTRACTOR for service.

3. Pest Management Site Information – The IPM Coordinator and Pest Managers will supply the CONTRACTOR with necessary information for each site covered by the contract. This information might include a list of buildings on that site, the known and probable pests, relevant pest control history and information about restrictions on access. See section VI for detailed policy regarding pesticide application. The IPM Coordinator may direct the CONTRACTOR to follow guidelines listed in a similar pest management plan such as the EPA IPM for Schools: A How-to-Manual. The CONTRACTOR shall be responsible for carrying out work according to the pest management plan and following priorities for pest control action. Any changes to the pest management plan must be approved by the IPM Coordinator.

Treatment for wood-destroying organisms may require a separate pricing process. Selection of the method of control will be consistent with Integrated Pest Management principles of reducing risk. Contractors holding a Branch I license will be evaluated based on their ability to provide the lowest risk and most effective control options.

B. Contractor Service Requirements

The CONTRACTOR shall furnish all supervision, labor, materials, and equipment necessary to accomplish the surveillance, trapping, pesticide application, and pest removal components of the IPM Program. The CONTRACTOR shall be responsible for providing detailed, site-specific recommendations to the Pest Manager about any structural, sanitary, or procedural modifications that would reduce food, water, harborage, access, or environmental conditions favorable to pests. The CONTRACTOR shall be responsible for adequately suppressing all pests included in this contract whether or not the suggested modifications are implemented. The CONTRACTOR may be required to carry out minor structural modifications such as caulking as part of the pest control effort or any other service deemed necessary by the Pest Manager. In addition, the CONTRACTOR shall be responsible for filling out Quality Control Forms with each site visit and will leave them with the appropriate Pest Manager or their staff before leaving the site. All of the above will be considered ROUTINE SERVICE.

C. Contractor Licensing Requirements

The CONTRACTOR shall have a Structural Pest Control Operator's license as defined by 8507 of Busi-

ness and Professions Code under the California Structural Pest Control Act.

Throughout the term of this contract, all CONTRACTOR personnel providing on-site pest control service must have proper certification and training as required by law. MINIMUM licensing requirements for ALL on-site pest control services will be a BRANCH II FIELD REPRESENTATIVE LICENSE as defined by 8507 of Business and Professions Code under the California Structural Pest Control Act. Contractor personnel that are certified applicators under Branch II may assist while the field representative is on site, but only upon approval of the IPM Coordinator.

For the inspection of wood-destroying pests, CONTRACTOR personnel may be required to operate under a BRANCH III license. If the CONTRACTOR will be sub-contracting out these inspection services, the sub-contractor must meet the approval of the IPM Coordinator and must adhere to the hourly fees established under this contract for routine service.

D. Contractor Insurance Requirements

During the term of the contract, CONTRACTOR will be required to secure and provide a minimum of 5 million dollars coverage (combined single limits) for General Liability (G/L), auto liability coverage (minimum 1 million dollars) and Workers' Compensation coverage (statutory limits). CONTRACTOR will be required to name the San Bernardino County Superintendent of Schools Office (employees, agents and officers), the Inland Empire Schools Insurance Authority (employees, agents and officers), and participating Districts (employees, agents and officers) as Additional Insureds on their G/L policy.

E. Requirements for Job Estimates

The CONTRACTOR will provide specific job estimates for projects that will likely cost $500.00 or more within a thirty (30) day completion period.

F. Contractor Fees for Service

The CONTRACTOR shall provide separate estimates for each of the following activities in this proposal. Billing for pest control activities shall be based on FIFTEEN (15) MINUTE INCREMENTS, shall have no minimum charge, and there shall be no charge for travel time to any participating District's site(s).

1. Routine Service (See Attachment B) Rate per hour (See Section 1.b).

Includes written reports requested by the IPM coordinator, all materials and supplies, formal meetings with District staff, employee supervision, quality control, technical training for DISTRICT staff and keeping District staff informed of new IPM techniques and practices. The CONTRACTOR should have monthly meetings with the IPM Coordinator during the first three months of the contract and then on a quarterly basis to assess the progress of the IPM program. Additional meetings may be requested by the IPM Coordinator on an as-needed basis.

2. Emergency Service (See Attachment B) Rate per hour (See Section V).

3. Formal Classroom Training (See Attachment B) (Rate per contact hour. Preparation time is not to be billed) (See IV E).

G. Payment Schedule

The individual participating Districts will be responsible for payment of the CONTRACTOR per CONTRACTOR'S invoices. Quality Control Forms (see section X) will be submitted completely and promptly to the Pest Manager at the close of each site visit.

II. Pests Included and Excluded

A. Included Pests

The CONTRACTOR shall manage indoor and outdoor populations of all pests within 10 feet of structures including, but not limited to rats, mice, cockroaches, ants, flies, fleas, spiders, and other pests that may invade structures and are not specifically excluded from the contract.

Certain bird species such as gulls and pigeons, as requested by the Pest Manager.

Termites and wood-destroying organisms (see sections I B and I C).

Skunks

B. Excluded Pests

Pests excluded from this contract are:

Mosquitoes

Pests that primarily feed on outdoor vegetation unless they are invading a structure.

Bats, snakes, and all other vertebrates not listed above.

Pests restricted to potted plants. (The CONTRACTOR will be expected to advise the Pest Manager when the source of a pest program originates in a potted plant).

III. Building Inspections

An initial pest control inspection shall be performed at each site or at the discretion of the Pest Manager and IPM Coordinator. Future inspections shall occur on an as-needed basis as requested by District personnel.

Building inspections shall be thorough and complete. Inspection reports shall be presented to the District at least five (5) working days prior to the start of any project. The purpose of the inspections is for the CONTRACTOR to evaluate the pest control needs of the premises and to identify problem areas and any equipment, structural features, or management practices that are contributing to pest infestations. The CONTRACTOR shall recommend appropriate changes to service based on the results of inspections and related activities. Access to building space shall be coordinated with the pest managers. The IPM Program Coordinator and Pest Manager will inform the CONTRACTOR of any restrictions or areas requiring special scheduling.

The CONTRACTOR is responsible for written recommendations regarding the need for further inspection to assess the damage to a structure resulting from the activities of termites and other wood destroying pests. The Pest Manager or IPM Coordinator will then request further inspection and/or treatment based on this recommendation. Inspections for wood destroying organisms shall be performed according to the rules and regulations of the Structural Pest Control Act by a licensed Branch III contractor.

IV. Specific Contractor Service Requirements

A. Proposed Material and Equipment for Service

The CONTRACTOR shall provide the IPM Coordinator with current sample labels and Material Safety Data Sheets (MSDS) of all pesticide products to be used, and list and describe pesticide application equipment, rodent bait boxes, insect and rodent trapping devices, pest monitoring devices, pest surveillance and detection equipment and any other pest control devices or equipment that me by sued to provide service. The description shall include brand names and other applicable information to clearly identify the products and their hazards. Additionally, applicable labels and MSDS shall be provided to the Pest Manager at each site.

B. Service Schedule

The CONTRACTOR shall provide complete service schedules for each building or site. The frequency shall be based upon pest problems and mutually agreed upon by the Pest Manager and IPM Coordinator. Once determined, the service schedule shall be included in a written service plan. Amendments to the service schedule may occur due to changes in the pest populations and should be noted on the Quality Control Form.

C. Monitoring, Surveillance, and Results

The CONTRACTOR shall recommend methods for monitoring and surveillance for sites with pests.

Objective assessments of pest presence and, when possible, population levels shall be promptly communicated to the Pest Manager.

D. Structural and Operational Changes

The CONTRACTOR shall recommend and describe site-specific solutions, including structural and operational changes for observed sources of pest food, water, harborage, and pest access at the time of inspection on the Quality Control Form. If a more detailed report is necessary, or if three consecutive reports asking for structural, operational, or sanitation changes have gone unheeded by the Pest Manager, a supplemental report shall be filed with five (5) working days to the IPM Coordinator. The supplemental report shall summarize prior recommendations and formally request the assistance of the IPM Coordinator.

E. Formal Training

The CONTRACTOR shall conduct training for District staff on various topics including trapping, monitoring, record keeping, trap-count assessment, safety, risk evaluation of products, and pest biology and recognition. The CONTRACTOR and IPM Coordinator shall confer and establish the training schedule and content. The IPM Coordinator has complete discretion over how often and to whom training is given. Any training must be approved by the IPM Coordinator and maximum fees shall be established before any formal classroom training commences.

F. Record Keeping

The CONTRACTOR shall be responsible for maintaining pest control records for all activities specified in this contract. Records shall include labels and MSDS for all pesticides products and other chemicals used in buildings, brand names of all pest control devices and equipment used in buildings, and the contractor's service schedule.

The CONTRACTOR shall keep any records required by law. Copies of all records required by law shall be provided to the IPM Coordinator, unless otherwise directed by the District.

G. Compliance

The CONTRACTOR shall observe all safety precautions throughout the performance of this contract. The CONTRACTOR shall comply with the applicable requirements of federal and state laws and regulations and policies of the District. Should there be conflict between applicable regulations, the CONTRACTOR should notify the IPM Coordinator before action is taken. In all activities, the CONTRACTOR shall strive for practices and procedures that protect public, students, employees, and the environment.

All CONTRACTOR personnel working in or around buildings designated under this contract shall wear distinctive uniform clothing. The CONTRACTOR shall determine the need for and provide any personal protective items required for the safe performance of work. Protective clothing, equipment, and devices shall, as a minimum, conform to federal, state, and local standards for the products being used.

H. Timing of Service Visits

The CONTRACTOR shall perform services that do not adversely affect tenant health or productivity during the regular hours of operation of the buildings and sites. When it is deemed necessary by the IPM Coordinator or Pest Manager to perform work outside of the regularly scheduled hours set forth in the service schedule, the CONTRACTOR shall notify the Pest Manager within 24 hours.

I. Special Entrance

Certain areas within some buildings may require special instructions for persons entering them. Any restrictions associated with these special areas will be explained by the Pest Manager. The CONTRACTOR shall adhere to these restrictions.

J. Vehicles and Other Equipment

Vehicles and other equipment used by the contractors shall be clearly identified in accordance with state and local regulations.

V. Emergency Service

On occasion, the Pest Manager or IPM Coordinator may request that the CONTRACTOR perform corrective, emergency service that is outside the scope of routine service activities. Emergency Service will be requested in writing when the health and safety of the public (students or visitors) or employees may be imminently threatened by any pest. The CONTRACTOR shall respond to these exceptional circumstances and initiate the necessary work within one (1) working day after receipt of the written request. In the event that such service cannot be completed in one working day, the CONTRACTOR shall immediately notify the Pest Manager or IPM Coordinator and indicate an anticipated completion time. If the stated anticipated completion time cannot meet the emergency needs of the District, the District staff may contract, on a temporary basis, with another pest control company to complete the emergency service.

VI. Use of Pesticides

The CONTRACTOR shall be responsible for application of pesticides according to all label restrictions and instructions. All pesticides used by the CONTRACTOR must be registered with the State of California, unless exempt from registration under FIFRA section 25b. Transport, handling, storage, disposal and use of all pesticides shall be in strict accordance with the pesticide product label and all applicable federal, state and county laws and regulations.

The CONTRACTOR shall adhere to the following rules for pesticide use:

A. Approved products

The CONTRACTOR shall apply only those pesticide products that have been approved by the IPM Coordinator.

B. Pesticide Storage

The CONTRACTOR shall not store any pesticide product on District premises without the approval of the IPM Coordinator.

C. Application by Need

Pesticide application (with the exception of Insect Growth Regulators) shall be according to need and not by schedule. As a general rule, application of pesticide in any interior or exterior shall not occur unless visual inspection or monitoring devices indicate the presence of pests in that specific area and use of a pesticide is the most effective management technique for an IPM program. Preventive pesticide treatments of areas are acceptable on a case-by-case basis where surveillance indicates a potential insect or rodent infestation. Written approval must be granted by the IPM Coordinator prior to any preventive pesticide application.

D. Risk Reduction

When pesticide use is necessary, the CONTRACTOR shall employ products and techniques that have been determined by the District, in consultation with other appropriate entities, to pose the least risk to people, students, workers, and the environment. Additionally, the most precise application technique and minimum quantity of pesticide necessary to achieve control shall be applied.

E. Application of Pesticides to Exposed Surfaces or as Area Sprays

Application of pesticides to exposed surfaces or as space sprays (including fogs, mists, and ultra-low volume applications) shall be restricted to unusual situations where no alternative measures are practical. The CONTRACTOR shall obtain the approval of the IPM Coordinator prior to any application of pesticide to an exposed surface or any space spray treatment. No surface application or area spray shall be made while people or animals are present in the general vicinity of the application. The CONTRACTOR shall take all necessary precautions to ensure tenant and employee safety, and all necessary steps to ensure the containment of the pesticide to the site of application.

VII. Insect Control

A. Emphasis on Non-Pesticide Methods:

The District prioritizes and the CONTRACTOR shall use non-pesticide methods of control wherever possible. For

example:

1. Portable vacuums, rather than pesticide sprays, shall be used for initial clean-outs of cockroach infestations, for swarming insects (ants, termites, and others), and for control of spiders in webs wherever appropriate.
2. Trapping devices, rather than pesticide sprays, shall be used for indoor fly control wherever appropriate.

B. Application of Insecticides to Cracks and Crevices

As a general rule, the CONTRACTOR shall apply all insecticides as crack and crevice treatments only, defined in this contract as treatments in which the formulated insecticide is not visible to a bystander during or after the application process.

C. Insecticide Bait Formulations

When pesticides must be used to control cockroaches, ants, and other insects, bait formulations shall be used whenever possible.

D. Monitoring

Visual identification, sticky traps or other devices shall be used to guide and evaluate indoor insect control efforts whenever possible.

E. Crack and Crevice Sealing

The CONTRACTOR may seal cracks and crevices with caulk, or other products approved by the IPM Coordinator. This should be considered part of routine pest control.

VIII. Rodent Control

A. Indoor Trapping and Control

As a rule, rodent control inside occupied buildings shall be accomplished with trapping devices only. The CONTRACTOR shall notify the Pest Manager of the location of each trapping device as part of the Quality Control Form. Trapping devices shall be checked on a schedule approved by the Pest Manager either by the CONTRACTOR or by a designee of the Pest Manager. The party responsible for visual inspection of the traps will be written on the Quality Control Form. The CONTRACTOR shall be responsible for disposing of all trapped rodents in a timely fashion and in an appropriate manner.

B. Use of Rodenticides

In exceptional circumstances, when rodenticides are deemed essential for adequate control, the CONTRACTOR shall obtain approval of the IPM Coordinator prior to making any treatment. As a rule, rodenticide application outside buildings shall emphasize the direct treatment of rodent nesting sites and burrows wherever feasible. In all other applications, bait formulations of rodenticides, regardless of packaging, shall be placed in EPA-approved tamper-resistant bait boxes.

C. Use of Bait Boxes

Frequency of bait box servicing shall depend upon the level of rodent infestation and the needs of the District. All bait boxes shall be maintained in accordance with EPA regulations, and with an emphasis on the safety for non-target organisms. The CONTRACTOR shall adhere to the following five points:

1. All bait boxes shall be placed out of the general view and in protected areas so as not to be affected by routine cleaning and other operations.
2. The lids of all bait boxes shall be securely locked or fastened shut.
3. All bait boxes shall be securely attached or anchored to the floor, ground, wall, or other immovable surface, so that the box cannot be pickup or moved.
4. Bait shall always be placed in the baffle-protected feeding chamber of the box and never in the runway of the box.

5. All bait boxes shall be labeled on the outside with the Contractor's business name, phone number, date, bait material, and bait EPA registration number by the CONTRACTOR or his employee at the time of installation. The labels shall be checked for readability at each servicing, and the date of most recent servicing shall be written onto the label.

IX. Program Evaluation

The Pest Managers and the IPM Coordinator will continually evaluate this contract in terms of effectiveness and safety. The CONTRACTOR will advise the IPM Coordinator as to the effort required to meet each proposed change and will adhere to such changes as are deemed necessary. The CONTRACTOR shall take prompt action to implement changes that will improve the program.

X. Quality Control Program

The CONTRACTOR shall establish a quality control program to assure the requirements of the contract are provided as specified. Within ten (10) working days of the approval of this contract, the CONTRACTOR shall submit their proposal to the IPM Coordinator. The IPM Coordinator shall approve or request amendments to the plan within 10 days of receipt. If amendments are requested, the CONTRACTOR shall resubmit an amended plan within 10 days of receipt. The program shall include at least the following items:

A. Inspection System

The Contractor's quality control inspection system shall cover all the services stated in this contract. The purpose of the system is for the CONTRACTOR to detect and correct deficiencies in the quality of services before the level of performance becomes unacceptable or the Pest Managers or IPM Coordinator identify the deficiencies.

B. Quality Control Form

The Quality Control Form will be developed by the CONTRACTOR and submitted for approval to the IPM Coordinator within 10 working days of the contract initiation. Amendments to the form will be returned to the CONTRACTOR within 5 working days of receipt of the proposed document. The form will be a checklist to evaluate job performance and shall be given to the Pest Manager during scheduled and unscheduled inspections and visits to conduct pest control.

The form shall include a summary of activities, results of inspections, placement of trapping devices, recommendations for structural or sanitation changes, and any other information regarding the provision of pest control services required to achieve effective pest control and management. The form shall also include specific reporting of information for pesticide use including the manufacturer and name of product, USEPA product registration number, total amount of product used, unit of measurement and the county-district-school code (CDS) where the application (or other use) of any pesticides occurred.

The form shall also include space for the Pest Manager to review or comment on work performed that day by the CONTRACTOR. The form shall be made in triplicate with the CONTRACTOR keeping one copy as part of their permanent records; the Pest Manager shall keep a copy and send the third copy to the IPM Coordinator. The CONTRACTOR's copy will not have the comments of the Pest Manager on it. The CONTRACTOR may request to view these comments by contacting the IPM Coordinator.

XI. Non-Compliance

Any non-compliance with the stated Conditions for Professional Service is grounds for termination of the CONTRACTOR services and the contract.

REQUEST FOR PROPOSAL

The City of Santa Monica is soliciting Service Proposals from qualified licensed Pest Control Operators for the implementation of an Integrated Pest Management (IPM) program to service City owned and occupied buildings and structures. The City's IPM program, as detailed in the enclosed "Conditions for Professional Service", is designed as a pest prevention program that stresses education and training of City staff as well as mechanical and chemical control. The City is seeking assistance in dealing with immediate pest control

problems until long-term solutions can take effect. Response to this request must address all aspects of the defined program and not simply extermination services.

Enclosed you will find the following documents which provide further detail regarding this request:

1. Conditions for Professional Service
2. Approximate list of City structures and buildings
3. Insurance requirements

Contract Duration and Renewal

The contract period shall be from October 1, 1996 through June 30, 1997. The City desires the right and option, at its sole discretion, to extend any contract for a period of one or two additional one-year periods from the date of expiration at the same terms and conditions.

Site Tour

Pest Control Operators will be invited to tour the various sites listed in Attachment A on August 13, 1996. We will meet at the Santa Monica Pier at 9 am. Please contact Debbie Raphael at (310) 458-2255 for directions and specific meeting location.

Submittal Format and Deadline

Licensed pest control operators responding to this request must submit a Pest Management Service Proposal according to the following format:

1. Copy of appropriate licenses of BOTH the Pest Control Operator and the personnel that will be servicing this account, including appropriate subcontractors (see section I.C. of Conditions for Professional Service).

2. Completed section I.F of Conditions for Professional Service listing hourly rates and other fees.

3. Description of services you will provide to accomplish the requirements of this program. Include the following elements:

   a. Detail of monitoring program for these sample pests: Norway rats, German cockroaches, Pharaoh ants, and termites (both subterranean and dry wood).

   b. Suggested format for training of Pest Managers (see section I. A.2) and general City staff.

   c. Quality control program.

4. List the options available to control the following pests. Rank the options in order of lowest risk to highest risk or group in categories of “low”, “medium”, and “high” risk to human health and the environment. Please include recommended brand names when applicable.

Pests: German cockroaches, American cockroaches, Argentine ants, Pharaoh ants, Norway rats, Roof rats, Mice, Cat fleas, House flies.

5. Estimate the overall cost of rendering the above services for the fiscal year ending June 30, 1997.

IPM RFP Scoring Sheet

| **Category** | **RFP Item #** | **Points Available** | **Points Assigned** |
|---|---|---|---|
| Copy of License for Pest Control Company and License #s for personnel servicing account (to include subcontractors) | 1 | 5 | |
| Hourly rates and other fees:<br>Routine = $ per hour<br>Emergency = $ per hour<br>Formal classroom training = $ per hour | 2 | List Costs | |
| Description of services to include:<br>Detail of monitoring program (5 pts)<br>Suggested format/outline for Pest Manager training (5 pts)<br>Quality control program (5 pts) | 3 | 15 | |
| Listing of options available to control pests (a-i) | 4 | 15 | |
| Estimate overall cost per school site, per contract year:<br>Colleges = $<br>Elementary schools = $<br>High schools = $<br>Middle schools = $<br>Support facilities = $ | 5 | List Costs | |
| COMMENTS: | | | |
| | POINT TOTALS | 35 | TOTAL BELOW |
| | | GRAND TOTAL | |

Evaluator's Name: _____

IPM Company Name: _____

Date: _____

Two copies of the Proposal for Service must be submitted to:

Brian Johnson
Environmental Programs Division
200 Santa Monica Pier, Suite J
Santa Monica, CA 90401

no later than 5:00 pm on August 23, 1996.

Please note:

When submitting documents to the City of Santa Monica, vendors are required to comply with the following guidelines:

All copies shall be printed on recycled and/or tree free paper. All copies shall be double-sided. Report covers or binders shall be recyclable, use of plastic covers or dividers should be avoided. Unnecessary attachments or documents not specifically asked for should not be submitted. Avoid superfluous use of paper (e.g. separate title sheets or chapter dividers).

These guidelines were developed as part of Santa Monica's Sustainable City Program to promote waste reduction and resource conservation within the community. Thank you for your cooperation in this important effort.

If you have any questions about this Request for Service Proposal, please contact Debbie Raphael at (310) 458-2255.

City of Santa Monica
Integrated Pest Management Program
Contract Bid Specifications
June 11, 1996

## I. General

A. Description of Program.

This contract specification is part of a comprehensive Integrated Pest Management (IPM) Program for properties owned, leased or other operated by the City of Santa Monica. IPM is a process for achieving long term, environmentally sound pest control through the use of a wide variety of technical and management strategies. Control techniques include structural modifications and cultural methods that reduce food, water, harborage, access, and environmental conditions that are favored by pests. Management strategies include education, training, and promotion of behavioral practices that are important in the IPM program.

The city will supply pest management plans, contacts, and management of structural repairs, modifications and maintenance. The IPM program coordinator will be responsible for implementation of the City's program. Pest managers will provide information necessary to implement IPM at specific sites and are the primary contact person for those sites. The City, on occasion, will identify specific major projects that may require separate bids, depending upon the scope and nature of the problem.

B. Contractor Service Requirements

The CONTRACTOR shall furnish all supervision, labor, materials, and equipment necessary to accomplish the surveillance, trapping, pesticide application, and pest removal components of the IPM Program. The CONTRACTOR shall be responsible for providing detailed, site-specific recommendations to the pest manager about any structural, sanitary, or procedural modifications that would reduce pest food, water, harborage, access, or favorable climatic condition. The CONTRACTOR shall be responsible for adequately suppressing all pests included in this contract regardless of whether or not the suggested modifications are implemented. All of the above will be considered routine service. The CONTRACTOR will not be held responsible for carrying out structural modifications as part of the pest control effort.

The CONTRACTOR will work from Pest Management Plans, which are guidelines for pest control activities for various sites. The Pest Management Plans identify pests that may be active at a specific site and information about options for pest control. Plans also contain information about restrictions on access and use of specific pest control techniques. If no plan is present, the IPM Program Coordinator may direct the CONTRACTOR to follow guidelines listed in a similar Pest Management Plan.

Throughout the term of this contract, all CONTRACTOR personnel providing on-site pest control service must have proper certification and training as required by law. Uncertified or untrained individuals, even if working under supervision of properly certified supervisor, will not be permitted to provide service under this contract. An uncertified person may assist a fully trained and certified technician but only upon approval of the IPM Program Coordinator.

C. CONTRACTOR will provide specific job estimates for projects that will likely cost $500.00 or more within a thirty (30) day period. Any project greater than $1000.00 will be subject to the City's formal bidding process.

Contract administration involves activities including formal meetings with City staff, detailed site-specific reports, employee supervision, quality control, technical training for CONTRACTOR staff, and keeping City staff abreast of new IPM techniques and practices. Billing for pest control activities shall be based on fifteen (15) minute increments and shall include travel time.

D. The CONTRACTOR will bid on the following specific activities:

Contract Administration _____ (Flat rate per year)

Routine Service (billing in 15 minute increments) _____ Rate per hour (See Section I.B).

Emergency Service (billing in 15 minute increments) _____ Rate per hour (See Section V)

Formal Training _____ (Rate per contact hour. Preparation time is not to be billed) (See IV E.)

E. Payment

The City will pay the CONTRACTOR within thirty (30) days of receipt of invoice. Contract administration fees shall be paid quarterly upon receipt invoice. A quality performance bonus of $1000.00 will for paid to the CONTRACTOR at the end of the Contract providing the CONTRACTOR'S performance meets the intent of this contract to reduce risks associated with pest control.

Quality performance will be judged on the following criteria:

1. Quality Control forms are submitted completely and promptly to the pest manager.

2. No more than five (5) per cent of the forms should contain concerns identified by the pest manager regarding the quality of the pest control service.

3. At least ninety (90) per cent of the Pest Managers feel that the CONTRACTOR communicates completely and effectively to them.

4. Ninety (90%) percent of all call backs related to pest control activities are made within 24 hours of the request.

**II. Pest included and excluded**

A. The CONTRACTOR shall manage the following pests:

Indoor and outdoor populations of pests including rats, mice, cockroaches, ants, flies, fleas, spiders, and other pests that may invade structures and not excluded from the contract.

Certain bird species such as gulls and pigeons

Termites and wood-destroying organisms (may be subject to City's formal bidding process: see section I B)

B. Populations of the following pests are excluded from this contract

Mosquitos

Pests that primarily feed on outdoor vegetation

Bats, snakes, and all other vertebrates not listed above.

**III. Building Inspections**

Building inspections shall be thorough and complete. Inspection reports shall be presented at least five (5) working days prior to the start of any project. The purpose of the inspections is for the CONTRACTOR to evaluate the pest control needs of the premises and to identify problem areas and any equipment, structural features, or management practices that are contributing to pest infestations. The CONTRACTOR shall recommend appropriate changes to the Pest Management Plans based on the results of inspections and related activities. Access to building space shall be coordinated with the pest managers. The IPM Program Coordinator and pest manager will inform the CONTRACTOR of any restrictions or areas requiring special scheduling.

Inspections shall be performed every three years for each site, unless a different schedule is developed and approved by the City.

**IV. Specific CONTRACTOR Service Requirements:**

A. Proposed Material and Equipment for Service: The CONTRACTOR shall provide the IPM Program Coordinator current labels and Material Safety Data Sheets (MSDS) of all pesticide products to be used, and list and describe pesticide application equipment, rodent bait boxes, insect and rodent trapping devices, pest monitoring devices, pest surveillance and detection equipment, and any other pest control devices or equipment that may be used to provide service. The description should include brand names and other applicable information to clearly identify the products. Additionally, applicable labels and MSDS will be available at each site.

B. Service schedule for each building or site

The CONTRACTOR shall provide complete service schedules for each building or site. The frequency shall be based upon pest problems and mutually agreed upon by the pest manager and IPM Program Coordinator. The CONTRACTOR shall be responsible for carrying out work according to the Pest Control Plan and follow priorities for pest control action. Any changes to the Pest Management Plan must be approved by the IPM program Coordinator.

C. Monitoring, Surveillance, and results

The CONTRACTOR shall recommend methods for monitoring and surveillance for sites with pests. Objective assessments of pest population levels shall be promptly communicated to the pest manager.

D. Structural and Operational Changes

The CONTRACTOR shall describe site-specific solutions, including structural and operational changes, for observed sources of pest food, water, harborage, and pest access at the time of inspection on the approved pest reporting form. If a more detailed report is necessary or if previous reports have gone unheeded a supplemental report should be filed with five (5) working days to the IPM program Coordinator.

E. Formal Training

The CONTRACTOR will be required to conduct training for city staff on various topics including trapping, monitoring, record keeping, trap-count assessment, safety, risk evaluation of products, and pest biology and recognition. Any training must be approved by the IPM Program Coordinator and maximum fees will be established before any formal training commences.

F. Record Keeping

The CONTRACTOR shall be responsible for maintaining pest control records for all activities specified in this contract. Records will include labels and MSDS for all pesticides products and other chemicals used in buildings, brand names of all pest control devices and equipment used in buildings, and the contractor's service schedule.

The CONTRACTOR shall keep any records required by law. Copies of all records as required by law shall be provided to the IPM Program Coordinator, unless otherwise directed by the City.

Safety and Health.

The CONTRACTOR shall observe all safety precautions throughout the performance of this contract. All work shall comply with the applicable requirements of Federal and State law, regulations, and City ordinances and policy. All work shall comply with applicable state and municipal safety and health requirements. Should there be conflict between applicable regulations, the CONTRACTOR should notify the IPM Program Coordinator before action is taken. In any event, the CONTRACTOR shall strive for practices and procedures that protect public, employees, and the environment.

All CONTRACTOR personnel working in or around buildings designated under this contract shall wear distinctive uniform clothing. The CONTRACTOR shall determine the need for and provide any personal protective items required for the safe performance of work. Protective clothing, equipment, and devices shall conform to federal, state, and local standards for the products being used.

H. Time frame of service visits

The CONTRACTOR shall perform services that do not adversely affect tenant health or productivity during the regular hours of operation of the buildings and sites. When it is necessary to perform work outside of the regularly scheduled hours set forth in the service schedule, the CONTRACTOR shall notify the pest manager at least three (3) days in advance.

I. Special entrance. Certain areas within some buildings may require special instructions for persons entering them. Any restrictions associated with these areas will be explained in the Pest Management Plan or by the Pest Manager. The CONTRACTOR shall adhere to these restrictions.

J. Vehicles and other equipment

Vehicles and other equipment used by the contractors shall be clearly identified in accordance with state and local regulations.

**V. Emergency service**

On occasion, the pest manager or IPM Program Coordinator may request that the CONTRACTOR perform corrective, emergency service that is beyond routine service projects. Emergency Service will be requested when the health and safety of the public or city employees may be threatened by a pest. The CONTRACTOR shall respond to these exceptional circumstances and complete the necessary work within one (1) working day after receipt of the request. In the event that such service cannot be completed in one working day, the CONTRACTOR shall immediately notify the pest manager or IPM Program Coordinator and indicate an anticipated completion time. If the stated anticipated completion time cannot meet the emergency needs of the City, the City staff may contract, on a temporary basis, with another pest control company.

**VI. Use of pesticides**

The CONTRACTOR shall be responsible for application of pesticides according to the label. All pesticides used by the CONTRACTOR must be registered with the State of California unless exempted under FIFRA section 25b. Transport, handling, storage, and use of all pesticides shall be in strict accordance with the pesticide product label and all applicable Federal and State of California laws and regulations and any City policy.

The CONTRACTOR shall adhere to the following rules for pesticide use:

A. Approved products: The CONTRACTOR shall apply only those pesticide products that have been approved by the IPM Program Coordinator.

B. Pesticide Storage: The CONTRACTOR shall not store any pesticide product on city premises without the approval of the IPM Program Coordinator.

C. Application by need: Pesticide application shall be according to need and not by schedule. As a rule, application of pesticide in any inside or outside area shall not occur unless visual inspection or monitoring devices indicate the presence of pests in that specific area. Preventive pesticide treatments of areas where surveillance indicates a potential insect or rodent infestation are acceptable on a case-by-case basis. Written approval must be granted by the pest manager prior to any preventive pesticide application.

D. Risk reduction: When pesticide use is necessary, the CONTRACTOR shall employ products and techniques that have been judged to pose the least risk to people, workers, and the environment. Additionally, use of the most precise application technique and minimum quantity of pesticide necessary to achieve control.

E. Application of pesticides to exposed surfaces or as space sprays:

Application of pesticides to exposed surfaces or as space sprays (including fogs, mists, and ultra-low volume applications) shall be restricted to unique situations where no alternative measures are practical. The CONTRACTOR shall obtain the approval of the IPM Program Coordinator prior to any application of pesticide to an exposed surface or any space spray treatment. No surface application or space spray shall be made while people are present. The CONTRACTOR shall take all necessary precautions to ensure tenant and employee safety, and all necessary steps to ensure the containment of the pesticide to the site of application.

**VII. Insect Control**

A. Emphasis on non-pesticide methods: The CONTRACTOR shall use non-pesticide methods of control wherever possible. For example:

1. Portable vacuums rather than pesticide sprays shall be used for initial cleanouts of cockroach infestations, for swarming insects (ants, termites, and others), and for control of spiders in webs wherever appropriate.
2. Trapping devices rather than pesticide sprays shall be used for indoor fly control wherever appropriate.

B. Application of insecticides to cracks and crevices: As a rule, the CONTRACTOR shall apply all insecticides as crack and crevice treatments only, defined in this contract as treatments in which the formulate insecticide is not visible to a bystander during or after the application process.

C. Insecticide Bait Formulations: Bait formulation shall be used for cockroaches, ants, and other insects whenever appropriate.

D. Monitoring: Sticky traps or other devices shall be used to guide and evaluate indoor insect control efforts whenever possible.

E. The CONTRACTOR may seal cracks and crevices with caulk or other products approved by the IPM Program Coordinator and should be considered part of routine pest control.

**VIII. Rodent control**

A. Indoor trapping and control: As a general rule, rodent control inside occupied buildings shall be accomplished with trapping devices only. Trapping devices shall be checked on a schedule approved by the pest manager. The CONTRACTOR shall be responsible for disposing of all trapped rodents in a timely fashion and in an appropriate manner.

B. Use of Rodenticides: In exceptional circumstances, when rodenticides are deemed essential for adequate control, the CONTRACTOR shall obtain approval of the IPM Program Coordinator prior to making any treatment. As a general rule, rodenticide application outside buildings shall emphasize the direct treatment of rodent nesting sites and burrows wherever feasible. In all other applications, rodenticides, regardless of packaging, shall be placed in EPA-approved tamper-resistant bait boxes.

C. Use of bait boxes: Frequency of bait box servicing shall depend upon the level of rodent infestation. All

bait boxes shall be maintained in accordance with EPA regulations, and with an emphasis on the safety on non-target organisms. The CONTRACTOR shall adhere to the following five points:

1. All bait boxes shall be placed out of the general view and in protected areas so as not to be affected by routine cleaning and other operations.
2. The lids of all bait boxes shall be securely locked or fastened shut.
3. All bait boxes shall be securely attached or anchored to the floor, ground, wall, or other immovable surface, so that the box cannot be picked up or moved.
4. Bait shall always be placed in the baffle-protected feeding chamber of the box and never in the runway of the box.
5. All bait boxes shall be labeled on the inside with the Contractor's business name and address, and dated by the contractor's technician at the time of installation and each servicing.

**IX. Program Evaluation**

The Pest Managers and the IPM Program Coordinator will continually evaluate the progress of this contract in terms of effectiveness and safety, and will require changes as are deemed necessary. The CONTRACTOR shall take prompt action to implement changes that will improve the program.

**X. Quality Control Program**

The CONTRACTOR shall establish a quality control program to assure the requirements of the contract are provided as specified. Within ten (10) working days of the approval of this contract, the CONTRACTOR shall submit a proposal of the quality control program to the IPM Program Coordinator for approval. The program shall include at least the following items:

A. Inspection system: The Contractor's quality control inspection system shall cover all the services stated in this contract. The purpose of the system is for the CONTRACTOR to detect and correct deficiencies in the quality of services before the level of performance becomes unacceptable or the Pest Managers or IPM Program Coordinator identifies the deficiencies.

B. Checklist: A checklist shall be used to evaluate job performance and shall be given to the pest manager during regularly scheduled and unscheduled inspections and visits to conduct pest control. The checklist should include a summary of activities and results and space for the pest manager to reviewer comment on work performed that day.

**XI. Non-compliance:**

Any non-compliance with this contract is grounds for termination of the CONTRACTOR and contract.

APPENDIX K

# How to Collect and Preserve Specimans for Identification

You can get help with pest identification from your County Department of Agriculture and University of California Cooperative Extension offices (look in your phone book under County Government). Often the entomology or botany departments of local universities and junior colleges can help.

If your pest problem is common in your area, the identification specialist may be able to confirm your identification over the phone just from your description of the organism and/or the damage it caused. Often, however, they must inspect the specimen directly.

**Collecting Insects and Mites for Identification**

Whenever possible, ask how your identification specialist would like the specimens preserved, and try to collect more than a single specimen. If you aren't able to ask about preservation before you collect, the following are useful guidelines.

Larger insects (those larger than aphids) or insects with hard bodies should be placed in a plastic container, such as a pill bottle, film canister, or other container with a snap-on lid. Crumpled tissue or cotton in the container can keep the insects from rattling around and losing body parts. Mail or hand-deliver the container to the identification specialist. If you are mailing specimens, it is a good idea to put the container in the freezer overnight to kill the insects before they go through the mail.

Very small insects or mites can be collected on plastic tape. Gently pat the insect or mite with the sticky side of the tape and secure the tape to a sheet of white paper. Be careful not to clutter the tape with extraneous debris. The paper with the tape can be mailed or hand- delivered to the identification specialist. Alternatively, insects and mites, even soft-bodied species such as aphids, can be left to dry out in a container and the identification specialist can rehydrate them for study later.

**Collecting Plant Specimens for Identification**

If you want to have a damaged plant inspected or a weed identified, place the plant between two sheets of paper and enclose in a file folder or place between two pieces of cardboard. If you are unable to deliver the specimen in person immediately, it is likely to shrivel or mold. In that case, use the process outlined below.

**Preserving a Plant Specimen**

Lay the plant between two sheets of writing paper and place on a flat surface. Try to spread the plant out so that leaves and stems are not covering each other. On top of the paper set several heavy, flat objects (such as phone books) large enough to cover the plant. Press the plant in this manner until it is completely dry. At this point, the specimen can be mailed in a file folder inside a padded envelope.

Plants preserved in this manner can also be kept in a file for future reference regarding weeds, pest damage symptoms, etc. To preserve the plant for your own file, place it on one half of the inside of a file folder. Cut a piece of clear contact paper the size of half the file folder. Separate the backing from the contact paper and lay the contact paper over the plant and folder, pressing out air bubbles by moving your hand from the inside outward. Write the name of the plant (if known), the date, and the location where it was collected on folder.

**Keeping a Record**

If you send a sample specimen for identification, we suggest you keep another for your own reference, because samples are rarely returned. Along with the sample, you should send records of potentially important information about the situation or problem surrounding the specimen. Keep a copy of this information for yourself. We suggest you follow this format:

- date the specimen was collected
- place or address where the specimen was collected and type of area (e.g., lawn, parking lot, etc.)
- specific area where the specimen was collected (e.g., "north side of building 1A," "under a stone," etc.)
- host plant, if the insect was found on a plant

APPENDIX L

# Pest Management Assessment Tool

The Pest Management Assessment Tool is meant to help consultants, pest control operators, or IPM Coordinators understand the pest management system at a school. This includes the organizational structure, pest management policies, key pests and how they are managed, and conditions conducive to pest problems. The Tool can help the assessor remember what to look for and what questions to ask during an initial pest management assessment.

The Assessment Tool can also be used to train school personnel in monitoring procedures and can help remind the IPM Coordinator of the elements of an effective IPM program.

This Assessment Tool consists of a number of forms, all of which can and should be altered to fit your particular situation. Computer software exists that can help you create and modify forms. With an electronic scanner, you can scan in forms from other sources and modify them to fit your needs.

Forms:

1. Pest Management Summary Form
2. Pesticide Use, Storage, and Disposal Checklist
3. Pest Inspection/Sanitation Report
4. Pest Proofing/Repairs Needed Inside
5. Pest Proofing/Repairs Needed Outside

# Pest Management Summary Tool

Date completed_____

School #1 _____
School #2 _____
School #3 _____

GENERAL SCHOOL INFORMATION

School Address _____
School District _____ Last Day of School _____
Superintendent _____ Phone Number _____
Address _____
Address _____
email _____ No. of years in position _____
Principal _____ Phone number _____
email _____ No. of years in position _____
PTA President _____ email _____
No. of Real Buildings _____ No. of Portables _____

POLICY AND PLANNING

IPM Policy for District? _____
Pest management budget? _____
Cost accounting for pest management? _____
IPM Plans for key pests? _____
Annual report on pest management? _____
Approved pesticide list? _____
Restricted pesticide list? _____
Other pesticide lists? _____
Policy on personal ownership/use of pesticide? _____
In compliance with State worker health and safety requirements? _____
What is the attitude toward trial and error and experimentation in pest management:
Attitude of managers? _____
Attitude of administration? _____
Are pest prevention techniques used? _____
Are they encouraged? _____
Are pest management implications considered prior to new construction or building renovation? _____
Are pest management implications considered prior to new landscaping or landscaping renovation? _____

TRAINING

Training in pesticide safety, use, and disposal? _____

Training in pest management is required? _____

How much? _____

IPM training included? _____

How much? _____

Who provides training? _____

Continuing education units offered? _____

Opportunities for pursuing State licensing (QAC, QAL)? _____

MONITORING/RECORD KEEPING

How often and under what circumstances is the campus inspected for pest problems or conditions conducive to pests? _____

Monitoring program in place for key pests? _____

Monitoring data recorded? _____

How: By hand? _____ Computerized? _____

Where are records kept?

How are pest sightings or complaints about pests relayed from teachers and admin. staff to pest management staff? _____

Are sightings and complaints recorded? _____

Are pest control treatments evaluated for effectiveness? _____

Are pest control strategies modified to reflect the evaluation? _____

COMPLIANCE WITH THE HEALTHY SCHOOLS ACT (AB2260)

School designee/IPM Coordinator selected? _____

(Include name and other information below under "Organizational Structure for pest management.")

Annual pesticide use notification letter sent? _____

Number of people on registry? _____

People on registry notified for each pesticide application (including those of contractor)? _____

Pesticide applications posted? _____

ORGANIZATIONAL STRUCTURE FOR PEST MANAGEMENT

Pest management activities carried out by district staff or school staff? _____

IPM Coordinator _____

Address _____

Address _____

Phone number _____ Fax number _____ email _____

No. of years in position _____ Licenses held _____

School Designee (if different from above)

Address _____

Address _____

Phone number _____ Fax number _____ email _____

No. of years in position _____ Licenses held _____

District Supervisor for Maintenance (if different from above) _____

Address _____

Address _____

Phone number _____ Fax number _____ email _____

No. of years in position _____ Licenses held _____

Other Important District Managers _____

Main Groundskeeper _____ Phone number _____

No. of years in position _____ Licenses held _____

Total No. of Grounds staff _____ No. holding licenses _____

Head CustodianPhone number _____ No. of years in position _____ Licenses held _____

Total No. of Custodians _____ No. holding licenses _____

Outside Contractors _____

Address _____

Address _____

Contact name _____ Phone number _____

Outside contractors provide district/school with periodic reports? _____

What frequency? _____

Work orders generated by _____

Work orders approved by _____

Pesticide use records stored _____

FOOD PREPARATION/SANITATION

Cafeteria/Kitchen? _____

Where do children eat? _____

Food Prep on Site? _____

Food in classrooms? _____

Pets in classrooms? _____

Lockers in school? _____

Sanitation for lockers? _____

Dumpster pickup schedule _____

Dumpster clean? _____

Lid on dumpster? _____

LANDSCAPING

No. and size of fields _____

No. and size of lawns _____

Other landscaping of concern _____

KEY PESTS

Insects in and around Structures _____

Primary pest _____

Pesticide(s) used _____

Other control methods _____

Secondary pest _____

Pesticide(s) used _____

Other control methods _____

Other/Comments _____

Conditions conducive to insect pests. (list all) _____

Vertebrates (other than birds) _____

Primary pest _____

Pesticide(s) used _____

Other control methods _____

Secondary pest _____

Pesticide(s) used _____

Other control methods _____

Other/Comments _____

Conditions conducive to vertebrate pests. (list all) _____

_____

_____

Bird pests _____

Pesticide(s) used _____

Other control methods _____

Other/Comments _____

Conditions conducive to bird pests. (list all) _____

Other structural pests _____

Pesticide(s) used _____

Other control methods _____

Turf Pests (other than weeds) _____

Primary pest _____

Pesticide(s) used _____

Other control methods _____

Secondary pest _____

Pesticide(s) used _____

Other control methods _____

Other _____

Conditions conducive to turf pests. (List all) _____

_____

Weed Pests _____

Primary weed _____

Herbicide(s) used _____

Other control methods _____

Secondary weed _____

Herbicide(s) used _____

Other control methods _____

Tertiary weed _____

Herbicide(s) used _____

Other control methods _____

Additional weed(s) _____

Herbicide(s) used _____

Other control methods _____

Conditions conducive to weeds. (List all) _____

_____

Other landscaping pests _____

Pesticide(s) used _____

Other control methods _____

Pesticide Use, Storage, and Disposal Checklist _____

# Pesticide Use, Storage and Disposal Checklist

**General**

❒ Pesticides used in school are registered in California.

❒ Copy of each appropriate label is available at use site.

❒ Applicators using restricted materials are licensed or certified to apply the material or under the direct supervision of someone who is.

❒ Records kept of pesticide use. Records must include the following to comply with the Healthy Schools Act:

- date and place of application
- amount used
- product names
- active ingredient(s)
- manufacturer's name
- U.S. Environmental Protection Agency's product registration number.

❒ Pesticide use records kept for 4 years in an area accessible to the public.

**Training**

❒ School keeps written records of applicator training.

Applicators are trained in at least the following:

- Meaning of precautionary statements on the pesticide label
- Routes pesticides can enter the body and the signs and symptoms of pesticide over-exposure
- Emergency first aid and how to obtain emergency medical care
- Safety requirements and procedures
- Environmental concerns such as drift, runoff, and wildlife hazards
- Applicable regulations and the Material Safety Data Sheet
- The location of the completed Hazard Communication for Employees Handling Pesticides in Noncrop Settings (Pesticide Safety Information Series N-8 from the Department of Pesticide Regulation **Appendix P** or your County Agricultural Commissioner).

**Equipment**

❒ Equipment in good repair and safe to operate.

❒ Equipment for mixing, loading, transferring, or applying pesticides is inspected before each day of use.

**Emergency Plans**

❒ List of emergency phone numbers in vehicles and/or an accessible area near a phone.

❒ List of first aid procedures in vehicles and/or at use sites.

❒ Name, address, and phone number of facility at which medical care is available is prominently posted in vehicles and/or at use sites.

**Storage and Disposal**

❒ Pesticides with signal words "Danger" or "Warning" stored in locked area that is dry, separate from food and feed, and away from children and pets.

❒ Sign reading "Danger: Poison Storage Area. All unauthorized persons keep out." posted on storage area.

❒ Pesticides with signal word "Caution" stored in dry areas away from children, preferably under lock and key.

# Pest Inspection/Sanitation Report

Date _____ School _____

Building#/Location _____

Inspector _____ Inspection Type _____ Initial _____

Quality Control _____ Routine _____

Evidence of Infestation(s) _____

Pest _____ Location _____

Pest _____ Location _____

❒ Ants ❒ Fleas ❒ Cockroaches ❒ Stored Prod. Pests ❒ Mice ❒ Pigeons ❒ Rats

❒ Other _____

**Sanitation Survey**

Food Preparation: ❒ Yes ❒ No Receiving: ❒ Yes ❒ No

❒ Equipment clean

❒ Floors clean

❒ Appliance drip pans clean

❒ Area neat and tidy; no clutter

❒ Floors clean

❒ Empty boxes stored in cold storage

❒ Floor drains clean

❒ Empty boxes stored away from kitchen

❒ Sink drains clean

❒ Public and Staff Areas

❒ Counters/Tables clean

❒ Restrooms clean

❒ Food stored pest-proof containers

❒ Plumbing in good repair; no leaks

❒ Perishables stored in refrigerator

❒ Locker room clean

❒ Garbage removed daily at end of day

❒ Locker room free of food and food waste

❒ Spillage cleaned regularly

❒ Employee lounge clean

❒ Floors and counters dry; no standing water

❒ Food stored properly in lounge

❒ Plumbing in good repair; no leaks

❒ Food stored properly in classrooms

❒ Windows/doors screened

❒ Trash removed daily before end of day

❒ Gaps around/under doors or windows repaired

❒ Janitorial closet clean

❒ Pest proofing needed
❒ Pest Proofing needed
❒ Storage Areas
❒ Exterior
❒ Floors clean
❒ Dumpster/garbage cans cleaned weekly
❒ Floor drains clean
❒ Dumpster/garbage cans have lids
❒ Food stored in pest-proof containers
❒ Lids closed on dumpster/garbage cans
❒ Recyclables cleaned before storing
❒ Garbage area downwind from kitchen
❒ Spillage cleaned regularly
❒ Dumpster/Garbage area clean
❒ Items stored 6" to 8" off floor
❒ Garbage removed at least weekly
❒ Items stored 12" to 18" away from wall
❒ Pet waste removed daily
❒ Stock rotated
❒ Loading dock clean
❒ Area neat and tidy; no clutter
❒ Gaps under/around doors repaired
❒ Pest proofing needed
❒ Area is trash- and weed-free
❒ Other_____
❒ Area is dry; no standing water
❒ Pest proofing needed
❒ Comments/Recommendations_____
_____
_____

# Pest Proofing/Repairs Needed Inside

Date _____ Inspector _____

Facilities Manager _____

Building#/Location/Address _____

For each repair, specify location and action needed. Draw a floor plan on the reverse side of this form to clarify locations. State priority for each work item.

■ Seal holes in wall around pipes, cables, and wires

■ Seal cracks and crevice with caulk or paint

■ Seal other holes 1/4" or larger

■ Fix leaky plumbing

Doors ❒ Repair ❒ Replace ❒ Weather-strip ❒ Add kickplate

Other _____

❒ Correct excessive moisture problems

❒ Remove clutter

❒ Organize storage rooms/closets

❒ Store rodent nesting material (fabric, paper, rug scraps, plastic, insulation) in rodent-proof containers

❒ Clean drains

❒ Screen drains

❒ Cap drains in basement floors

❒ Store human and pet food in pest-proof containers

❒ Improve sanitation

❒ Dispose of insect- or rodent-infested goods

❒ Remove fecal matter (rodents, bats, birds)

❒ Sanitize animal droppings

❒ Investigate secondary pest potential from rodent infestation (e.g. fleas, mites)

# Floor Plan

Building location _____

Draw a floor plan and mark locations for repairs or pest-proofing.

# Pest Proofing/Repairs Needed Outside

Date _____ Inspector _____

Building#/Location/Address _____

For each repair, specify location and action needed. Draw a building plan on the reverse side of this form to clarify locations. State priority for each work item.

- Cut vegetation back from building walls at least 18 inches
- Remove ivy or other vines from sides of buildings or nearby trees
- Trim back tree branches that touch or rub against building
- Seal /repair air conditioning units
- Seal holes in wall around pipes, cables, and wires
- Seal other holes 1/4 inch or larger

Doors ❒ Repair ❒ Replace ❒ Weatherstrip ❒ Screen

Other _____

Windows ❒ Repair ❒ Replace ❒ Weatherstrip ❒ Screen

Other _____

❒ Repair roof

❒ Move compost into rodent proof container

❒ Fix leaking irrigation

❒ Eliminate standing water

❒ Improve drainage

❒ Screen drains

❒ Bring order to storage sheds/garages

❒ Store rodent nesting material (fabric, paper, rug scraps, plastic, insulation) in rodent-proof containers

❒ Store grass seed and pet food in rodent-proof containers

❒ Remove debris, lumber or rock piles

❒ Move firewood piles as far away as possible from structure

❒ Cut grass or weeds

❒ Remove fallen fruit or nuts

❒ Remove fecal matter (rodents, bats, birds)

❒ Sanitize animal droppings

❒ Investigate secondary pest potential from rodent infestation (e.g. fleas, mites)

# Floor Plan

Building location _____

Draw a floor plan and mark locations for repairs or pest-proofing.

APPENDIX M

# Monitoring Forms

# Landscape Monitoring

Date 6/15

Name of Person Monitoring John Doe

**Describe location of appropriate category:**

Ornamental beds _____

Sport turf _____

Ornamental turf _____

Playground _____

Fence Lines _____

Paved Areas _____

Trees Northwest corner of school entrance

Other _____

| Name of Plant | Condition* of Plant<br>Excellent Fair Good Poor | Name of Pest<br>(if any are present) | Abundance* of<br>Pests Plant Damage<br>Few Common Abundant Innumerable | Presence of Natural Enemies | Management Activities | Comments |
|---|---|---|---|---|---|---|
| Blue Spruce | Good | Cooley Spruce Gall Aphid | Common Common | None | Pruned 80% of Galls out of tree | Continue monitoring |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | EXAMPLE | | | |
| | | | | | | |
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| | | | | | | |

*See accompanying charts for explanation

# Landscape Monitoring

Date _____

Name of Person Monitoring _____

**Describe location of appropriate category:**

Ornamental beds _____

Sport turf _____

Ornamental turf _____

Playground _____

Fence Lines _____

Paved Areas _____

Trees _____

Other _____

| Name of Plant | Condition* of Plant<br>Excellent Fair Good Poor | Name of Pest<br>(if any are present) | Abundance* of<br>Pests Plant Damage<br>Few Common Abundant Innumerable | Presence of Natural Enemies | Management Activities | Comments |
|---|---|---|---|---|---|---|
| | | | | | | |
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| | | | | | | |

*See accompanying charts for explanation

## Indicators of Plant Condition

| Plant Condition Rating | Leaf Color | Amount/Size of Growth | Damaged Plant Parts | Presence of Pest Problems |
|---|---|---|---|---|
| Excellent | Good | Adequate | None to few | No major ones |
| Good | Good | Slightly reduced | Few to Common | A few minor ones |
| Fair | Poor | Much reduced | Common to abundant | Either major or minor ones occurring frequently |
| Poor | Poor | Severely reduced | Innumerable | Both major and minor ones occurring frequently |

Leaf Color: Note that there are healthy plants that do not have bright green leaves. Leaves can be purple, yellow, or sometimes a mottled yellow and green (variegated). Good leaf color will not always be the same; it will depend on the kind of plant.

Amount/Size of Growth: This refers to the length of the new growth for the season as well as the number of new leaves, and the size of the leaves, flowers, or fruit.

Damaged Plant Parts: Look at the whole plant. Are there leaves with holes, spots, or discolorations? Are there wilted or dead leaves? Are there dead twigs or branches? Is the damage only on old leaves while new leaves look perfectly healthy?

Presence of Pest Problems: A major pest problem is one that has seriously affected or injured the plant and requires management. A minor pest problem may or may not have affected or injured the plant and may or may not require management.

## Pest and Plant Damage Abundance Chart

| Abundance Rating | Indicators of Abundance |
|---|---|
| Few | Organisms or plant damage occasionally found, but only after much searching. |
| Common | Organisms or plant damage easily found during typical searching. |
| Abundant | Organisms or plant damage found in large numbers – obvious without searching. |
| Innumerable | Organisms or plant damage extremely numerous – obvious without searching. |

These charts were adapted from Michigan State University Pest Management Manual

# Weed Monitoring Form for Turf

Location of Turf _____ Date _____

Data Collected By _____ Length of Pace _____

Distance between sampling points of transect _____ (for example every nine paces)

Number of transects _____ Length of transects _____

Sketch of location of transects

| | Transect A | | | | Transect B | | | | Transect C | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Yes** | **No** | **Bare** | **Weed I.D.** | **Yes** | **No** | **Bare** | **Weed I.D.** | **Yes** | **No** | **Bare** | **Weed I.D.** |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
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| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |

**Average % weed growth** _____ **Average % bare area** _____

Total the number of boxes marked 'Yes' in each column. Multiply this number by 100 and divide by 60 [the total number of samples taken). The result is the average percentage of weeds growing in the turf area. Follow the same procedure to calculate percentage of bare area.

# Roach Trap Monitoring

Building # 3

Room or Area Cafeteria

Name of Person Monitoring John Doe

| Trap # | Room # or Name | Date Trap was Set | Date Trap was Read | Trap Missing | Location Description | Roaches Adults | Roaches Nymphs | Roaches Total |
|---|---|---|---|---|---|---|---|---|
| 1 | Kitchen | 3/5 | 3/26 | | SE Drain, under gate | 0 | 0 | 0 |
| 2 | Kitchen | " | " | | S Sink under electric box | 1 | 1 | 2 |
| 3 | Dishroom | " | " | yes | S under conveyor belt | - | - | - |
| 4 | Dishroom | " | " | | N under conveyor belt | 0 | 0 | 0 |
| 5 | Storage | " | " | | left side of door | 0 | 0 | 0 |
| 6 | Dining | " | " | | W serving counter | 0 | 2 | 2 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | EXAMPLE | | | | | |
| | | | | | | | | |
| | | | | | | | | |

6 **Total # of Traps**

0.66 **Average # of Roaches/Traps**
(Total # of Roaches divided by total # of traps)

**Total # of Roaches** 4

*See accompanying charts for explanation

# Roach Trap Monitoring

Building # _____

Room or Area _____ Name of Person Monitoring _____

| Trap # | Room # or Name | Date Trap was Set | Read | Trap Missing | Location Description | Roaches Adults | Nymphs | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
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_____ **Total # of Traps**

_____ **Average # of Roaches/Traps**

(Total # of Roaches divided by total # of traps)

**Total # of Roaches** _____

*See accompanying charts for explanation

# Pest Control Trouble Call Log

_____

| TROUBLE CALLS | | | | | | PEST MANAGEMENT RESPONSE | | |
|---|---|---|---|---|---|---|---|---|
| Date | Building | Problem Description | School Contact | Phone | Date | PCO Name | Action Taken | Materials* Used & Amounts Used |
| | | | | | | | | |
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*Pesticides, caulk, traps, etc.

# Pest Inspection/Sanitation Report

Date _____ Time In _____ Out _____

Building#/Location _____

Inspector _____

Inspection Type ❒ Initial ❒ Quality Control ❒ Routine

## Evidence of Infestation(s)

| Pest | Location(s) | Pest | Location(s) |
|---|---|---|---|
| Ants | | Fleas | |
| Cockroaches | | Stored Prod. Pests | |
| Mice | | Pigeons | |
| Rats | | Other | |

## Sanitation Survey

| **Food Preparation** | **Yes** | **No** | **Receiving** | **Yes** | **No** |
|---|---|---|---|---|---|
| Equipment clean | | | Floors clean | | |
| Appliance drip pans clean | | | Clutter | | |
| Floors clean | | | Empty boxes stored in cold storage | | |
| Floor drains clean | | | Empty boxes stored away from kitchen | | |
| Sink drains clean | | | **Student and Staff Areas** | | |
| Counters/Tables clean | | | Restrooms clean | | |
| Food stored in pest-proof containers | | | Plumbing leaks | | |
| Perishables stored in refrigerator | | | Locker room clean | | |
| Garbage removed daily before closing | | | Food stored in locker room | | |
| Spillage cleaned regularly | | | Teacher's lounge clean | | |
| Standing water | | | Food stored properly in lounge | | |
| Plumbing leaks | | | Food stored in student, staff, or teacher desks | | |
| Windows/Door screened | | | Trash removed daily before closing | | |
| Gaps around/under doors or windows | | | Janitorial closet clean | | |
| Pest proofing needed | | | Pest Proofing needed | | |
| **Storage Areas** | | | **Exterior** | | |
| Floors clean | | | Dumpster/garbage cans cleaned weekly | | |
| Floor drains clean | | | Dumpster/garbage cans have lids | | |
| Food stored in pest-proof containers | | | Lids closed on dumpster/garbage cans | | |
| Recyclables cleaned before storing | | | Garbage area downwind from kitchen | | |
| Spillage cleaned regularly | | | Dumpster/Garbage area clean | | |
| Items stored 6" to 8" off floor | | | Garbage removed at least weekly | | |
| Items stored 12" to 18" away from wall | | | Pet waste removed daily | | |
| Stock rotated | | | Loading dock clean | | |
| Clutter | | | Gaps under/around doors | | |
| Pest proofing needed | | | Area is trash- and weed-free | | |
| Other | | | Standing water | | |
| | | | Pest proofing needed | | |
| | | | Outside eating area cleaned daily | | |
| | | | **Other** | | |
| | | | | | |

Comments/Recommendations _____

_____

APPENDIX N

# Inspection Checklist for Detecting Structural Decay and Structural Pest Damage

Check the following locations for structural decay and pest damage. Check both visually and by probing with a pointed tool, such as an ice pick. Look for signs of moisture, damaged wood, insect frass, and termite earthen tunnels and/or fecal pellets.

**Roof, Overhangs, Gutters, Eaves, Trim, Attic**

**Roof Surface**

Check the roof for cracks, missing shingles, and other openings where moisture might enter. Shingles should extend 3/4 inch or more beyond the edge of the roof and should form a continuous drip line at the eave and end rafters, or at the rake boards that cover the end rafters.

Remove leaves from the roof surface, and replace any missing shingles. Install flashing or an aluminum drip edge under the first course of shingles to divert rainwater from the fascia board and walls of the building.

Be careful not to block eave vents. Install flashing; it should curl over the forward edge of the fascia board about 2 inches and then run about 6 inches beyond a vertical line drawn from the inside face of the wall studs.

Check for the formation of masses of ice on the roof near the gutters, which can lead to water filtration and/or excessive condensation on interior attic walls.

**Gutters**

Check for poorly sloped, clogged, rotted, or leaking gutters that can lead to eave, overhang, or siding leaks and rots. Remove leaves and twigs that absorb moisture and cause rot. Flush gutters with a hose prior to the rainy season. Install downspout leaf strainers and gutter guards.

**Attics**

Extra effort is needed to inspect areas difficult to see or reach. Use a good light source and a probe. Search for rain seepage or decay around vent pipes, antennas, wall top plates, skylights, and other vents.

**Eaves, Overhangs, and Fascia Boards**

Make sure there is at least 18 inches of overhang to allow proper water runoff. Extend short overhangs. Search for soft, tunneled, cracked, or exposed areas. Check areas where algae, moss, lichens, or discoloration occurs; these symptoms may indicate moisture problems and termites.

**Flashings**

Make sure areas around vents, chimneys, and dormers are flush and well sealed. Rusty or broken nails can cause problems in flashings. Aluminum or galvanized nails are required to prevent electrolysis (a chemical reaction between dissimilar metals that causes the nails to disintegrate). Seal nail head and flashing joints with marine-quality caulk or silicone (tar preparations are cheapest, but they crack after a few years in the sun).

**Damaged or discolored areas**

Search for exposed areas that are soft, tunneled, cracked, rotted, or blistered. Check for algae, moss, lichens, or discoloration, since these areas indicate potential openings for fungi and/or insects. Locate the sources of moisture and make the necessary repairs.

**Outside Walls Rusty Nails**

Check for rusty nails or nail staining, which indicates moisture within the wall and/or the use of non-galvanized nails. Replace nails with aluminum or galvanized nails or screws.

**Deteriorating Paint**

Look for signs of deteriorating paint such as loss of paint sheen and bubbling and peeling; scrape and sand the surface and repaint. If the wood seems soft, weak, or spongy, scrape out the spongy parts. If holes are smaller than 1/2 inch in diameter, fill them with caulk. Larger holes can be filled with epoxy wood-filler. If holes are very large, replace the wood.

**Building Siding That is Stained or Buckled**

Stained or buckled siding (with or without peeling paint) is a symptom of underlying moisture, rot, or insects. Check for moisture caused by splashing rain or lawn sprinklers. If possible, remove the source of the moisture and refinish or replace the damaged wood. Consider using a more durable material, such as aluminum siding. Pressure-treated woods are treated with toxic materials and their use should be minimized.

**Damaged Wood Junctions**

Moisture and insect problems often occur where wood pieces join or abut, particularly when there is shrinkage, splintering, or settling. Corners, edges of walls, roof-siding intersections, and siding-chimney contacts are particularly vulnerable. Apply water repellent and caulk to these joints, and monitor them regularly for building movement.

**Weathering of Exposed Lumber/Beam Ends**

Check for expanded, split, or cracked lumber ends, which provide access for moisture and insects. Even previously treated wood is subject to attack if the openings are deep enough. Caulk cracks and monitor for further developments.

**Loose Stucco or Cracks in Stucco**

Search for cracks, especially stress cracks around windows and doors. These conditions can provide access to moisture, termites, and decay organisms. Caulk cracks. If they are large, consider replacing the old stucco.

Moisture Accumulation around Laundry Facilities, Especially Dryer Vents

Check for signs of moisture accumulation around the vent. Modify the vent to direct exhaust air away from the building.

**Moisture Associated with Pipes and Ducts**

Check for moisture where ducts pass through wooden parts of a building. Also, check downspouts during heavy rains for leakage and proper drainage. Insulate ducts, install splashguards below downspouts, repair the spouts, and direct water away from buildings.

**Moist Window Sills, Windows, or Doors**

Check for cracked sills and casings, and poorly fitted windows and doors. Badly fitted doors may indicate warping of the door or its casing from excessive moisture or uneven house settling. Moisture problems can alter door jambs. Warped and cracked sills and poorly fitted windows and doors allow water access which aids decay and provides initial insect habitat.

Caulk cracks and monitor for further development. Warped door thresholds and jambs may need replacement, and casings may need repair if the cracks are too large to caulk effectively.

**Foundation and Grade Soil Surface**

Make sure the soil surface slopes away from the school building in order to carry water away from the foundation. Seepage under the foundation will cause it to crack and settle. Add fill to direct the water away from the house but make sure there is at least 8 inches between the top of the fill and the sill. If clearance is small, consider installing foundation “gutters”. Install splash blocks and perforated pipe. Check their performance during rains or test the system with a hose. A sump pump can also be used to move water away from the foundation.

**Low Foundation Walls and Footings Allowing Wood-to-Soil Contacts**

Check for wood in contact with the soil. Wood should be at least 8 inches, and preferably more, above the soil surface. Low foundation walls or footings often permit wooden structural members to be exposed to the soil, providing access for subterranean termites. Repair these areas or install subgrade concrete "gutters" where the house sills sit too close to ground level. Remove wood that is exposed to the soil and replace it with concrete.

**Foundation Cracks**

Check for cracks that allow decay organisms access to wood. Cracking may also indicate uneven house settling. Monitor cracked walls for discoloration and seepage during rains. Termites use cracks to gain access to wood hidden from view. If the problem is serious, the foundation may need repair.

Brick Veneer or Stucco Applied to the Foundation

Check the bond between the veneer or stucco and the foundation wall. If it is failing, moisture and termites may have a hidden entrance to wooden portions of the building. Remove the loose covering and explore the extent of the decay.

**Crawl Space, Basement, and Foundation**

Make sure enclosed crawl spaces are vented to allow moist air to escape. Milder climates are especially vulnerable to dry-rot fungus. In humid climates, the subfloor can be wet from condensation from interior air-conditioning. Shrubbery or other obstacles that block airflow through foundation vents cause air underneath the house to stay warm and moist-an ideal environment for termites.

Clean existing vents of dust, plants, and debris. Foundation vent openings should equal 2 ft2 of opening for each 25 linear feet of outside wall. An opening should occur within 5 feet of each corner. Add more vents if needed. The top edge of the concrete under all vents should be at least 6 inches above the finished grade to allow sufficient ventilation. Vents located below grade may require wells to prevent surface water from entering subfloor and basement areas. Divert roof drainage away from vents.

**Corners of the Building**

Check for moisture accumulation and stains at junctions of wood surfaces in these areas. Install additional cellar or crawl space vents.

**Enclosed Areas**

Check for proper ventilation under staircases, porches, and other enclosed areas, since these are vulnerable to moisture accumulation. Look for decayed, discolored, or stained areas. Adjust or add venting.

**Vapor Barriers**

Check for condensation on the subfloor and/or sill, which may indicate the need for vapor barriers on the subfloor and on the soil surface in the crawl space. Such barriers can be installed to reduce the moisture resulting from poor soil grading, unexpected seepage, or high rainfall.

Cover the crawl space soil surface with a 6-mil polyethylene vapor barrier. Use polyethylene, not roofing paper, which can rot. A slurry of concrete can be placed over the plastic to protect it from rodents. Where condensation continues, consider installing extra vents or electric-powered vents whose fans and openings are operated automatically. A sump pump can be installed to remove standing water.

**Wood-to-Stone or Wood-to-Concrete Contacts**

Check to see whether the wood is pressure-treated (look for perforation marks from the chemical injection on the surface of the wood ). Replace untreated wood with rot-resistant or pressure-treated wood. Be sure sealing material is used between the wood and stone or concrete, and place a metal washer between posts and footings.

**Leaky Pipes or Faucets**

Even small leaks keep the wood or soil underneath continuously moist, thereby setting up ideal conditions

for termites. Areas where rain splashes on walls should be protected with rain guards. Do not allow sprinklers to spray the side of the building. Fix all leaks, and change irrigation practices where necessary.

**Water- or Space-Heating Units**

Check to see whether the heating unit is insulated. If the soil near the flame is kept warm throughout the year due to lack of insulation, microbial and insect development will be accelerated. Insulate the heater and cover the soil with concrete.

**Paper Collars around Pipes**

Since paper is almost pure cellulose, it is extremely attractive to termites and should be removed and replaced with other insulting materials not capable of being eaten by termites.

**Miscellaneous Openings**

Meter boxes, bathroom inspection doors, pet doors or openings, milk delivery doors, and air exhaust vents should be checked for water access, cracks, termite pellets, and soft areas.

**External Areas**

**Porches**

Check for wooden steps touching the soil, and inspect for possible decay or termite access. The porch surface must slope away from the building to carry rain away quickly. If the porch does not slope away from the building, check siding for moisture and termites. Tongue-and-groove flooring is a water trap. If there is a space between the porch and the building, check for drainage problems.

Caulk and repair cracks. Fill spaces between tongue-and-groove floorboards with caulk or resurface and refinish with wood-sealing compounds and appropriate paint. Another floor can be placed over the first.

**Earth-Filled Porches**

Soil should be at least 8 inches, (optimally 12 to 18 inches) below the level of any wooden members. Remove the excess soil where possible, regrade to enhance drainage and redesign the porch to eliminate earth/wood contact.

**Planter Boxes**

Check planter boxes that are built against the building. If they are in direct contact with the building, they allow direct termite access to unprotected veneer, siding, or cracked stucco. One remedy is adding 2 to 3 inches of protective concrete wall between the planter and the building. An air space several inches wide must separate the planter wall from the building and must be kept free of dirt or other debris.

**Trellises and Fences**

Check for wooden portions of the trellis that touch the soil and are connected to the house, since they provide a direct link to the house for wood-rot and termites. Check fence stringers and posts for decay. Cut off the decay and install a concrete footing for trellises and fence posts. Replace decayed stringers and leave a small gap between the stringers to allow air circulation. Separate wood and concrete with metal washers.

**Wooden Forms around Drains**

These are sometimes left in place after the concrete foundation is poured and provide termites with access routes to inner walls. Areas and joints around pipes rising from slabs should be sealed with tar or other adhesive to prevent water and termite access. Caulk the holes and monitor them for decay and excess moisture.

**Gate Posts, Fence Tie-ins, Abutments and Columns**

Inspect these for weakness and rot especially around areas adjacent to the soil. Exposed areas can provide cracks for termite invasion. If wooden posts go through concrete into the soil below, check the posts for evidence of termite attack. The bottoms of these posts should be cut and replaced with a concrete footing. Cut post tops at an angle to promote runoff and prevent water from penetrating the vulnerable end grain.

**Balconies and Landings**

Surfaces should be sloped away from the building. Check junction of floor and siding for moisture and insects.

**Wood Debris under and around Buildings**

Pieces of wood, particularly partially buried tree roots or construction lumber, can help support a termite colony until the population grows large enough to attack the house itself. Since cardboard boxes are very attractive to termites, they should be removed from crawl spaces or basements with earthen floors.

**Interior Locations**

Areas with water stains or mold growth indicate excessive moisture and should be analyzed for corrective action. Pay special attention to areas listed below.

**Kitchen Pipes**

Look for condensation and leaks, especially where pipes enter walls. Repair leaks and insulate pipes where condensation is excessive.

**Counter Areas**

Check around and below sink surfaces for moisture and decay. Caulk or otherwise protect wall surfaces from moisture. Subsurface areas damaged by water leaking from above may be tolerated if the surface leaks are repaired.

**Exhaust Vents**

Check for moisture leaks from outside. Repair with caulk or water-resistant sealing material, or replace the vent and the rotted wood around it. Use extra flashing to fill the gap.

**Toilets**

Check the integrity of the floor around each toilet base by thumping lightly with a hammer. Check the wax seal for leakage at the floor/toilet pedestal intersection. Check the cellar or crawl space beneath the toilets to see whether the leakage has caused damage. Replace the wax seal if necessary and repair the surrounding water damage.

**Showers and Sinks**

Check all sinks and showers for a sound caulk seal. Look for splash over on the floors from inadequate water barriers or user carelessness. If moisture is visible from crawl spaces, it may indicate a crack in the floor or in drainage pipes. If moisture is visible in the ceiling, it may indicate cracks in the delivery pipes.

Repair or replace flooring materials, pipes, drains, or sink basins if necessary. Sealing compounds may be useful when leaks are relatively recent and small, especially if termites have not been found; however, regular monitoring is necessary if sealing materials are used.

**Tile Walls**

Check for mildew stains. Make sure the grout in tile walls has a silicone coating to prevent water penetration. Clean the walls regularly to remove mildew and improve ventilation.

**Ceilings**

Check for blistered areas, since these can indicate moisture leaks in the area above or inadequate installation of a vapor barrier. Repair leaks and faulty vapor barriers.

**Windows**

Check for moisture accumulation and/or water stains on window frames and walls. Search for evidence of decay or insect attack next to glass areas where condensation accumulates, at edges where moldings meet walls and casings, and in window channels and door jams. Gaps between window and door casings may be avenues for hidden moisture and insect access. Check interior walls beneath windows, especially if they are regularly wetted by garden sprinklers.

Open windows when feasible to improve air circulation. Install double- or triple-glazed windows when replacement is necessary. Use aluminum frames if wooden frames are decaying. Adjust or move sprinklers so water does not hit windows.

**Closets**

Check coat and storage closets for dampness. A light bulb left burning continuously in a damp closet will often generate enough heat to dry it out, but make sure the bulb is far enough away from stored materials to avoid creating a fire hazard. Containers of highly absorbent silica gel, activated alumina, or calcium chloride also remove moisture from the air in enclosed spaces. These agents should be placed out-of-reach to avoid accidental exposures. Avoid use of silica gel where children may tamper with the containers. These chemicals can be reused after drying them in the oven. Small exhaust fans can also improve closet ventilation.

**Floors**

Sagging or buckling floors can indicate shrinkage or rot from excessive condensation or water leaks. Gaps between floor and baseboards can indicate wood damage from insects, fungi, or water-triggered swelling and shrinkage.

APPENDIX O

# Training and Licensing Opportunities

A variety of pest management licensing and training opportunities exist in California. The following organizations can provide information about licensing and/or training:

- The Department of Pesticide Regulation regulates pesticide use and sales and fosters reduced-risk pest management. For information about any of DPR's programs phone 916-324-4100 or see the Web site at www.cdpr.ca.gov.
  - Licensing: DPR is responsible for examining and licensing qualified pesticide applicators, and for certifying pesticide applicators who use or supervise the use of restricted pesticides. See the Licensing and Certification Program Web page at www.cdpr.ca.gov.
  - Training: DPR has a list of all approved continuing education classes on the Web site that are frequently updated. Go to www.cdpr.ca.gov and click on either the Licensing and Certification Program link or the School IPM page link.
- The Structural Pest Control Board licenses individuals to perform control of structural pests. They also offer training. Contact them at 916-561-8700 or online at http://www.pestboard.ca.gov/index.html.
- Local community colleges: See the local yellow pages or go to http://www.cccco.edu/ for more information.
- California State University: Visit the Extended University homepage at http://www.gateway.calstate.edu/extension/index.shtml for details.
- UC Extension: Each campus of the University of California offers continuing education courses. Go to http://www.ucop.edu/unex/ for more information.
- Many professional associations include IPM training at annual meetings or hold separate IPM training sessions.

For more information about local IPM training, contact the County Office of Agriculture or the county office of the University of California Cooperative Extension.